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Colloquia Chirurgica:

OR, THE

Art of SURGERY

EPITOMIZ'D and made EASY, according to Modern Practice.

By Way of Dialogue.

WHEREIN

All Things neceſſary to be Known and Practis'd in the Cure of *Tumors*, *Ulcers*, *Wounds*, *Fractures*, and *Diſlocations*, are conciſely handled, practically and plainly apply'd; the Rules ſo ſhort, that the Whole may with eaſe be remember'd; and the Method ſo certain, that it may be always ſafely depended upon: Whereby every one may be able, in a very ſhort time, to give an Account of his Profeſſion, without reading a Multitude of Books.

To which is added

A COMPENDIUM of ANATOMY,

Containing, in a very few Words, the principal Matters relating to the Structure of MAN'S BODY, and which are moſt neceſſary firſt to be learnt by every *Young Practitioner*, for whoſe Benefit the Whole is made publick. The like (for *Brevity* and *Method*) not extant; and which may be of univerſal Uſe, as a Pocket-Companion, both by Sea and Land.

The Fourth Edition, Reviſed and Corrected:

To which is added,

An APPENDIX, containing a Safe and Eaſy Method to cure the Venereal Diſeaſe.

By *JAMES HANDLEY*, Surgeon:
Formerly of the ROYAL NAVY.

Quam quiſque novit Artem in eâ ſe exerceat.

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THE

PREFACE.

IT *affords me no ſmall pleaſure, to ſee this little Manual come now to a Fourth Edition, in ſpite of all its Enemies; ſome of whom ſay, it is a needleſs Piece, it teaching nothing but what may be met with in other Authors; whilſt ſome complain, that it renders the Art too eaſy to be attained, ſo that hereby almoſt any body may ſoon learn to be a Surgeon: and (as I am informed) very ſoberly* wiſh me hang'd *(I thank them) for publiſhing ſo plain a Treatiſe.*

As to the firſt, I anſwer, that it was at firſt written with a View only to inſtruct the young Surgeon what to do, and how to anſwer any common Queſtion, that could be put to him, without reading a multitude of Books, or overcharging his Memory with their nume-

rous Inſtructions: Eſpecially ſuch, as are thirſty after Knowledge, and have either Time to read, or Money to purchaſe them. The young Surgeon that reads this, *with attention, I am perſuaded, will not call this a needleſs Performance, (the Sale of three former Impreſſions already ſold off, are a ſtrong evidence of the contrary;) and as for the old Practitioner, he has no cauſe to* hurry *himſelf about it, for it was never deſigned for him. And if what is here ſaid, may be found in other Authors, I conceive it is not therefore the leſs valuable; becauſe, when you read* this, *you read* them, *at the ſame time, without buying of them, and the young* Tyro *is hereby prepared to comprehend and digeſt what he may read in others, without asking queſtions of any one. He that deſigns to be a Scholar muſt not begin by reading* Homer *and* Virgil, *but the Rudiments of Grammar, and Books of a lower Claſs; and ſo proceed gradually, that he may with more eaſe, underſtand thoſe of a higher, in due time.*

And

And as to thoſe, who think I expoſe the Art too much, and make it too cheap, they will do well to conſider, that none but thoſe of ſome Learning are capable to underſtand what is here written: and ſuch, (if deſign'd for Surgeons) cannot have too much aſſiſtance, nor be informed in too plain a Method: and as to the Intruder, *and the* Illiterate, *that has no Education, nor any Notion of the Art, until he reads this, it will be of no more benefit to him, than if it was wrote in* Hebrew. *It being of uſe only to* ſuch, *as are educated under ſome good Practitioner in the Art, and that are daily attending upon Patients, and ſo may compare what they read here with their Practice, and thereby ſo imprint the Art on their Minds, that they may be able to render a reaſon for every thing they do: and he ought not to be called a Surgeon, that cannot. And if this be to make me worthy of blame, let them that are offended* rail on, *and* welcome, *whilſt (I doubt not) my young Brethren will give me thanks.*

To this Edition, I have added an Appendix, containing moſt certain Rules how to treat a Patient, under the Venereal Diſeaſe, in almoſt every Caſe that can occur; which to the young Surgeon (I hope) will render the Book ſtill more valuable.

I confeſs, with ſorrow, that the Errors of the Preſs, in the laſt Edition of this Book were intolerable; *which my diſtance from it, rendered me uncapable to prevent. But I hope, this will not meet with the ſame Fate: and where any miſprintings ſhall appear, I beg the Reader to be ſo good as to correct them (as he goes along) with his Pen; and to have the Charity to believe, that all ſuch* Errata *are my Vexation, and ſhould not paſs uncorrected by my own Hand, could I have attended the Preſs in Perſon.*

And altho' by reading many Books, the Judgment may be confounded, yet it is certainly very neceſſary, that the young Surgeon ſhould read ſome *of the beſt that are extant: in order to which, I would recommend to him in particular,*

lar, *Dr.* Daniel Turner's *two Volumes of the Art of Surgery: I say, the ingenious, the incomparable Dr.* Turner! *formerly a famous and expert Surgeon, and now, as celebrated a Physician; a Gentleman of great Erudition, and uncommon Skill in both Professions, in whose Books the Reader will find abundant Pleasure and Information.*

And I would advise him, to study well the Reduction of Fractures and Dislocations; and not to suffer those Vermine, *that dignify themselves with the despicable Name of* Bone-setters, *to run away with this great Branch of our Art, who know nothing of the Structure of those Bones, nor their Articulations, which they impudently pretend to reduce, when fractured, or dislocated. It is a melancholy Consideration, that these* Bone-coblers, *that, like Mushrooms, start up without planting, that have neither Learning nor Education, nor know the Number, or Names, nor Formation of any Bone in a human Body, nor have any one Qualification, but* audacious

Assurance; *yet should be so much in the Favour and good Opinion of Country People, that they apply to them as* Oracles, *and freely submit to have their Limbs violently extended by them, for no reason, but a single Contusion or Sprain, which these* Bone-Tinkers *call Dislocations or Fractures; and then willingly pay them, as if the Case really had been so. Whilst the honest Surgeon that would not come into the* Bite, *is discarded; and for his Integrity, look'd upon as an* Ignoramus. *For as a Surgeon will not pronounce a Bone* fractured *or* dislocated *that is not; yet these* Bone-setters, *if they are called in after him, seldom fail to declare that* one *of them, if not* both, *is the case: and altho' it is impossible in Nature, (where there is really a Fracture, or Dislocation) for the Patient to use his Limb in so short, (or much longer) time: yet when one of these* Deluders *pretends to reduce a Bone, and the Patient is abroad again, and at work, in a Week or ten Days time, the People are so infatuated, that they believe*

lieve it not only poſſible, *if done as it ought, but actually believe* it was ſo, *becauſe their Bone-ſetter told them, that their Caſe was* ſuch: *and really think it the Effect of his* ſuperior Skill; *when the truth of the Matter was, that there was neither Fracture, nor Diſlocation, nor any thing more than a Contuſion, or Sprain.*

There is one of theſe Fellows, not many Miles from me, who by virtue of a Dioceſan Licenſe, *makes* this *his daily practice: and altho' his Original was a* Sowgelder, *and now actually follows the Trade of a Farrier; yet this wicked Mortal has more Buſineſs (not only in Bone-ſetting, but in all Caſes of Surgery alſo) than any three Surgeons in the County. Yet he is ſo ignorant, that I ſpoke with a poor Man, on the inſide of the Juncture of whoſe Knee, he divided the Skin, and endeavoured to cram in a Pea, in order to make an Iſſue there upon the very Bone. But it is all loſt labour to tell the ignorant Country People of theſe Abuſes, they believe it only Malice and Ill-will againſt*

their

their Bone-ſetter, becauſe he does (as they fancy) what we cannot.

I remember that near forty Years ago, I aſſiſted Mr. Pepper *and Mr.* Maurice Berkley *ſen. two ingenious Surgeons, in amputating an Arm, which, but the Evening before, received a ſimple Fracture on the* Os Humeri, *near the Shoulder; and one of theſe Bone-ſetters being called to reduce it, bound up the Limb ſo hard, and tied a ſet of Hoopſticks, with ſharp Ends, and no Coverings, ſo very* tight *round it, that all Circulation was ſtopp'd, the natural Heat extinguiſhed, and a* Sphacelation *induced, paſt all Recovery: and which nothing could remedy, but Amputation. And yet this* Wretch, *this* Blunderbuſs, *knew not how to prevent it, nor ever dreamt of the Bandages being too hard, or remember'd the hard ſharp Ends of his Splints, as the Cauſe of the poor Patient's miſerable Complaints of Pain,* &c. *for if he had, by looſing the one, and arming the other in time, the Mortification might eaſily have been prevented: but (as*

I remember) *he told the Patient, that his Pain was nothing but what was common in ſuch Caſes, and ſo made no further Enquiry, until the Cauſe was found out by a wiſer Man, when it was too late.*

The like happened not many Miles from me, a few Years ſince; and the Surgeon that amputated the Arm aſſured me, that the Bandage was not only ſo tight, as to cauſe the Mortification, but the two Ends of the fractur'd Os Humeri *rode over one another an Inch or two; ſuch a bungling Pretender was the Bone-ſetter, and who notwithſtanding is in as great vogue as ever, with all the Country People round about him.*

The Surgeon that amputated this Arm, was that excellent practical Surgeon and Scourge of all Bone-bunglers, *Mr.* Charles Rome *of* Wooburne *in* Bedfordſhire, *mentioned in the Preface of the laſt Edition of this Book with honour: who lately favour'd me with ſeveral Hiſtories of the vile Ignorance of theſe Fellows, very ſurprizing; but they being too long to be inſerted in this Preface,*

I muſt (tho' unwillingly) omit them. I can only here give the Reader part of a Letter he ſent me, with the former Hiſtories, (viz.)

Sir, According to my promiſe, I here ſend you a few Remarks upon the Conduct of thoſe vile and wicked People, who call themſelves *Bone-ſetters*, brought up to the Plow, ſome of them; and others, to the moſt ſervile Employments; and the generality of them ſo ignorant of the Frame of a human Skeleton, and the Articulations of the Heads of the Bones therein, that ſcarce one of them I ever met with, was capable of giving proper Names thereto, or of laying down the Rules, of knowing each ſeveral Diſlocation, or the means by which, in the moſt commodious manner, they are to be replaced: only boldly pulling and hauling the Patient about, and then afterwards affirming, that they have done the Work, &c.

Therefore, you my young Brethren, ſpare no pains to make yourſelves Maſters of this Branch of our Art, and get ſuch

ſuch a Perfection in the Knowledge of the Structure of the Bones, and their Articulations, by ſtudying well a human Skeleton, that you may be able, at ſight, to pronounce a right Judgment, and not be miſtaken, by declaring a Bone fractur'd or diſlocated, when it is not; *nor by affirming, that it is not ſo,* when it really is. *For in the firſt Caſe, you commit a Fraud; and in the latter, you make a Cripple, and ſtain your Reputation; all which every Surgeon ought carefully to avoid, as he values a good Conſcience, or a good Name: not but ſometimes, in ſome Caſes, where the Limbs are very muſcular, and large, and much tumified, and the Injury not very evident (as it ſometimes happens) a good Surgeon may be puzzled to make a right Judgment* at once: *therefore, in ſuch a caſe, be very cautious, leſt you fall into an Error, which, however, with due Care and Conſideration may be avoided. And when you are ſure that there is either a Fracture or Diſlocation, be not diſcouraged, but go chearfully,*

fully, manfully, and like an Artiſt, to work, to reduce it; which how to do, you will find ſufficient Directions in this Book, if you have Courage, and a competent Meaſure of Skill.

And if you deſire Information in many other Parts of your Art, and would be further enabled to give a rational Account of what you do, and of the Reaſon of a multitude of uncommon and curious Things, as delightful as profitable; I would recommend to your Reading a Book of mine, called, Mechanical Eſſays on the Animal Oeconomy. *I ſhall ſay no more in its Recommendation,* becauſe it is mine; *but do believe you will not think the time ill ſpent, when you have read it.*

J. HANDLEY.

A

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Colloquia Chirurgica:

OR THE

ART of SURGERY

Epitomiz'd and made Eaſy.

CHAP. I.

Of Tumors *in general.*

Q. *WHAT is Surgery?*

A. Surgery, or *Chirurgery*, by its *Etymology*, τῆς χειρὸς ἔργον, ſignifies *Manual Operation*; and by the Learned in that Art, is defined to be, *The third Branch of the Curative Part of Medicine, which teacheth how ſundry Diſeaſes of the Body of Man are to be cured by Manual Operation.*

Q. *How ought a Surgeon to be qualified?*

A. He ought to have a reaſonable Experience in all Parts of his Art; to have a competent Stock of Learning; to have an unſhaken Courage, a ſteady Hand, a clear Sight, to be able to give a rational Account of what he does, and to be an *honeſt Man.*

Q. *What is a* Tumor?

A. It is a Diſeaſe, for the moſt part, incident to the *Organical Parts*, increaſing their Quantity above Nature, by reaſon of receiving ſuperfluous Humours, ſent from other Parts.

Q. *How are thoſe Humours received?*

A. By *Affluxion* or *Congeſtion.*

Q. *What is* Affluxion?

A. It is when an *Humour* offending, either in *Quantity* or *Quality*, ſuddenly and with Violence, ſeizeth upon any Member, either by reaſon of its Weakneſs, Rarity, Looſeneſs, Dependency, Heat, or Pain, or becauſe the whole Body is full, and the Parts ſending, ſtrong.

Q. *What is Congeſtion?*

A. That is when an Humour is collected in any Part, by little and little, by reaſon of the Weakneſs of the concocting and expelling Faculty of the ſame.

Q. *What do you mean by an* Organical Part?

A. Chiefly a *Muſcle*; in which are a Membrane, Fleſh, Tendon, *&c.* Alſo a *Nerve*, which conveys the animal Spirits, and diſtributes them; and the *Arteries*, which do the ſame by the Blood.

Q. *What are the Denominations of a* Tumor?

A. In Greek it is called ὄγκος; that is, a Protuberance in the Body: The *Arabians* and their barbarous Followers call all Tumors *Apoſtemata*; in Latin *Abſceſſus.* All Tumors, wherein is a Collection of Matter, we call *Apoſtems.* The Word *Tumor* is a Latin Word, and is derived from the Word *Tumeo*, to be raiſed or puffed up.

Q. *What are the Cauſes of* Tumors?

A. Surgeons reckon up eight *External Cauſes*, (*viz.*) 1. A contagious Air in time of the Plague. 2. Things exceeding Temperature in the active Qualities; as, *Veſicatories*, ſitting long on a cold Stone,

Stone, *&c.* 3. When too hard Ligature is made upon a Part. 4. The Application of Cupping-glaſſes. 5. A Wound, Fracture, Luxation and Contuſion. 6. Biting of any Beaſt. 7. By taking Things inwardly offenſive to Nature. 8. Immoderate Motion, whereby immoderate Heat is produced, and the Humours become more ſubtil.

Q. *What are the* Internal Cauſes?

A. Either *Humours* or *Flatuoſities.*

Q. *What are the* Humours?

A. Either Natural or Unnatural, and they again either *Sincere* or *Mingled.*

Q. *Which are thoſe which you call* Sincere?

A. Choler, Phlegm, and Melancholly.

Q. *Which do you call* Mingled?

A. When one of the former is mingled with the Blood; (for Blood is no where *Sincere*, but according to the Humour mingled with it, which is predominant) it is called Cholerick, Phlegmatick, Melancholly Blood.

Q. *What are the* Unnatural *Humours?*

A. Water; as in the Dropſy, *&c.*

Q. *What other Diſtinctions have you?*

A. Simple and *Compound.*

Q. *What do you call a* Simple *Tumor?*

A. If it proceed from Blood, (tho' it be never unmixed) it is called *Phlegmone*, or *Inflammatio*; if from Choler, *Eriſipelas* and *Herpes:* All which are hot Tumors. Of Phlegm, is an *Oedema*; of a Melancholly Juice, is a *Schirrus:* And theſe two are cold Tumors. If from *Atra Bilis*, Cancer; if from Water, it is called *Tumor Aquoſus*; and particularly from hence come *Hernia Aquoſa*, *Hydrops*, *Hydrocephalus*, &c. If from Flatuoſity, it is called *Emphyſema:* And theſe are cauſed by the defect of the natural Heat.

Q. *What do you call* Compound *Tumors?*

A. When there is a Combination of theſe, they beget a Compound *Tumor*, and what Humour moſt predominates, carries away the Name; as *Phlegmonodes*, *Eriſipelatodes*; and ſo of the reſt.

CHAP. II.

Of the general Indications of Cure in Tumors.

Q. *WHat is an* Indication?

A. It is that which ſheweth what Courſe is to be taken for the *Recovery of Health.*

Q. *From whence are the general Indications taken?*

A. Either from the Matter, or Times of every *Tumor.*

Q. *As how?*

A. In the Matter, we are to obſerve the Motion of it, and its Nature; as concerning its Motion, it is either in flowing, or is already received into the Part.

Q. *What are the Cauſes of Fluxion?*

A. Two; (*viz.*) *Plethora*, or Fulneſs; and *Cacochymia*, or an ill Habit. *Plethora* is of two ſorts, *ad vaſa*, and *ad vires.*

Q. *What do you underſtand by that?*

A. Ad vaſa, is when the Veins are only full, and the Body nevertheleſs quick and nimble: And that it is again (1) pure, when there is a due Proportion of the Humours of the Body; and (2) impure, when there is an Exceſs of any of the three Humours, beſides Blood; as Phlegm, Choler, and Melancholly. *Ad vires*, is when there is ſuch a Fulneſs as cauſeth a Laſſitude of the whole Body.

Q. *What muſt be done in this Caſe?*

A. Ple-

A. Plethora, requires *Phlebotomy*; and *Cacochymia*, Purging: Both which are to be done according to the Strength of the Patient.

Q. *How do you diſcern Strength and Weakneſs?*

A. By the Functions, thus: The Weakneſs of the *Natural Faculty* is diſcerned by Crudity of Urine, and Excrements of the Body; the Weakneſs of the *Vital Faculty*, by a weak Pulſe, and by breathing weak, and ſick; and the Weakneſs of the *Animal Faculty*, is found out by defect in moving, and feeling.

Q. *What are the Ends of* Phlebotomy?

A. Derivation, and *Revulſion.*

Q. *What are they?*

A. Derivation, is a drawing of the Humour to the Part adjacent, or of the ſame ſide, by opening a Vein, or a Branch of it, which is inſerted into the Part affected. *Revulſion*, is a drawing of the Humour to the oppoſite Part, as from the Head to the Feet, from the right Side to the left, *&c.*

Q. *What more will you do, to prevent, or abate* Fluxion?

A. Since a hot Diſtemperature is moſt commonly the Cauſe, we muſt apply Things cooling; as Cloths moiſtened in *Ol. Roſar.* or *Violar.* laid on cold, and renew them as they grow hot; or apply *Unguent. Roſat. de Ceruſſa, Populeon*, &c. between two Cloths.

Q. *Why between two Cloths?*

A. It thereby keeps the *Unguent* from drying, and doth not hinder the perſpirating of Vapours, which it otherwiſe would do, and thereby increaſe both Pain and Heat. The ſame we are to do alſo when we apply *Cataplaſms* to this purpoſe.

Q. *But what if the Ways by which the* Tumor *paſſeth be too large, and a hot Diſtemperature joined, how will you proceed then?*

A. Then Things aſtringent and cooling are to be applied, Rollers and Cloths being moiſtened in them: As, *Bacc. Myrtil. Fol. Roſ. Rub. Sicc. Cort. Granat. Balauſt. Sumach. Cort. Querci*, &c. *Coq; in Vin. Rub. vel Aceto, & Aq. Font.* And the Parts by which the Humours paſs, are to be rolled pretty ſtraight with Rollers dipped in the ſame.

Q. *But ſuppoſe the* Tumor *be painful?*

A. Then I uſe *Anodynes* or *Narcoticks.*

Q. *What are* Anodynes?

A. They gently *Contemperate* the Part, by reaſon of the Conformity which they have to the Nature of Man; are hot in the firſt Degree, and are of ſubtil Parts: As, *Lac, ol. olivar. vet. axung. porcin. adeps humani, anſeris, gallin. urſi, Ol. Cham. lilior. lumbricor. lini, amygd. dulc. ovor. ol. Roſar. pul. Croci*, &c. Or make this *Cataplaſm*; ℞ *Fol. viſc. pomorum cum fructibus, ana* Mj. *Fol. Hyoſciami* Mij. *Fol. papaveris* Mj. *ſub cineribus coquantur, addendo tandem Mic. panis in lacte tepido macerati, vitell. ovor.* N°. ij. *pulv. Croci.* 3j. *ol. Cham. & Roſar. ana q. ſ. fiat Cataplaſm.* S. A.

Q. *What are* Narcoticks?

A. They deprive the Part of the *Faculty of Feeling:* And ſuch are, *Opium, Hemlock, Night-ſhade*, &c. Theſe are to be uſed when the former will not prevail. Sometimes (but ſeldom) they are uſed alone, and ſometimes with Things hot, if we fear Stupefaction of the Part unto which they are to be applied.

Q. *Suppoſe the* Tumor *proceeds from the Bite or Sting of a venomous Beaſt?*

A. (1.) Then the Part is to be immediately ſcarrified, and Cupping-glaſſes to be applied; and then the Part is to be fomented, *cum Aceto & Ther. Ven.* and a Cataplaſm *ex Ther. Ven.* applied over all. The Member is to be bound hard two

or

or three Inches above the Bite or Sting; and *Ther. Ven. cum Sal. viperar.* to be given inwardly three times a Day: Or, ℞ *Fol. Rutæ contuſ.* ʒvj. *allii contuſ. Ther. Ven. vel Mithridat. & Raſuræ Jovis, ana* ʒiiij. *coq. ſuper lento igne, in Cereviſ. fortiſ.* ℔iiij. *ad* ℔ij. *& Colat.* &c.

Keep it in a Bottle cloſe ſtopt; the Doſe is 9 or 10 Spoonfuls, ſeven Mornings faſting, warm, as ſoon as poſſible after the Bite; and apply ſome of the Ingredients to it daily, warm. *vid. Pharm. Bat.*

Q. *What do you underſtand by the Times of a* Tumor?

A. I underſtand the *Beginning*, the *Increaſe*, the *State*, and the *Declination.*

Q. *What do you call the Beginning of a* Tumor?

A. The Beginning I take to be, when a Part begins to tumify.

Q. *What Medicines are then moſt proper?*

A. Repelling Medicines, which are cold, and of a groſs Subſtance, to thicken the Part affected, and to cool the inner Parts of it: And ſuch are, *Alb. ovor. plantag. ſemper-viv. ſolan. petroſelin. fol. Roſ. rub. Bacc. Myrtill. Cort. granat. Galliæ, ſang. Drac. Ter. ſigillat. Acet.* &c.

Q. *Are you to uſe repelling Medicines in all Caſes?*

A. No: As, (1.) If the Matter be venomous or malignant, leſt being repell'd it aſſault ſome principal Part. (2.) If the Matter be critically turn'd to a Part. (3.) If a *Plethora* abounds. (4.) When the Humour floweth to the Emunctories. (5.) If the Part have but little natural Heat, leſt it mortify. (6.) If the Pain be very great; for then only *Anodynes* are to be uſed.

Q. *What do you call the* Increaſe *of a Tumor?*

A. When the Part is ſtretched, and Symptoms increaſed.

Q. *What is Diſcuſſion?*

A. It is an Evacuation of a thin Matter, (gathered in a Part) by inſenſible Perſpiration, procured by the natural Heat, increaſed by proportionate Medicines, *&c.*

Q. *What do diſcuſſive Medicines effect?*

A. They help natural Heat: Which being done, (1.) The Humour is made thin. (2.) It is reſolved into Vapour. (3.) It is drawn from *the Center* to the *Circumference.* (4.) It is expell'd by the Pores of the Skin: Wherefore they muſt be familiar to Nature, and ſuch as perform their Office by conſuming ſuperfluous Humidity, and muſt be hot and dry.

Q. *How many Degrees of diſcuſſive Medicines are there?*

A. Three: (*viz.*) (1.) Thoſe that are hot and dry in the ſecond Degree: As, *Fic. Cham. Galb. Rad. Lilior. Melilot. Adeps anſeris, Altheæ,* &c. and becauſe ſuch eaſe Pain, we ſhould ever begin with them. (2.) Thoſe that are ſomething more hot and dry: As, *Calamint. Puleg. Hyſſop. Menth. Sem. Cymin. Anethi, farin. fabar. & fœnugrec. adeps Urſi & Can. vet.* &c. (3.) Thoſe that dry in the third Degree; as Nitre, unſlaked Lime, *Sulph. viv.* &c. If the Tumor is hard, forbear *Repellents*, and uſe *Diſcutients* and *Emollients*; ℞ *Rad. & Fol. Altheæ, ana* Mj. *Sem. lini & fœnugrec. ana* ℥vj. *pulv. flor. Cham. & Melilot. ana* ℥ij. *far. Hord. & Tritici ana* ℥vj. *fiat Cataplaſm. addendo Mel. Com.* ℥ij. *Ol. Sambuc. & Axung. anſeris ana* ℥j.

Q. *What do you call* the State of a *Tumor?*

A. When it is come to ſuch a Degree as it can grow no bigger.

Q. *How do you know when that is?*

A. All Symptoms are at their height, when neither increaſing, nor decreaſing.

Q. *What will you do then?*

A. Uſe

A. Uſe Anodynes with Diſcutients, by reaſon of Pain.

Q. *How will you know when the Tumor* declines?

A. When the Symptoms begin to abate.

Q. *What muſt be done then?*

A. I muſt then uſe *ſtrong Diſcuſſives*, as before ſpoken of; or in caſe of Neceſſity, *Diach. cum gum. Diach. Ireat*, &c.

Q. *How do Tumors end?*

A. By Reſolution, Maturation, Induration, and Corruption; and as Diſcuſſion is better than Suppuration, ſo Induration is better than the Corruption of the Part.

CHAP. III.

Of Curing Tumors *in general, come to Suppuration.*

Q. *SUppoſe you cannot diſcuſs a Tumor, What will you do then?*

A. Bring it to Suppuration, or Maturation, vulgarly call'd *Apoſtemation*; and that is, when the impacted Blood, or Humour, is converted into *laudable Matter.*

Q. *How is this done?*

A. By outward Applications laid on warm, which working upon the ſuperfluous Humidity, cauſeth Putrefaction.

Q. *But ſuppoſe it attended with Pain, would you not uſe Narcoticks?*

A. No, for they extinguiſh the *Natural Heat of the Part*, which is the principal Cauſe of *Coction*; they alſo thicken the Matter, and make it more rebellious: but inſtead of them I uſe *Anodynes*, which we ſpoke to before. Q. *But*

Q. *But what if Hardneſs poſſeſs the Part?*

A. Then I uſe *Emollients.*

Q. *What are they?*

A. All Fats: *Omn. ſpec. Malv. tuſſilag. ſem. Cydonior. lill. alb. ſem. lini. fic. Uvar. paſſ. Medul. Omn. Ammoniacum, Bdellium,* &c. of which Cataplaſms may be framed.

Q. *But if immoderate Heat trouble the Part, what muſt be done?*

A. I muſt uſe things cooling in the ſecond Degree; as, *Umbilic. Veneris, ſemper-viv. lil. aquatic. plantag. farin. Hord.* &c.

Q. *But when theſe Accidents are removed, what then?*

A. Then I proceed to aſſiſt Nature, *by increaſing Natural Heat,* by ſuppurating Medicines which ought to be ſuch as moderately ſtop the Pores, only ſuffering the ſharp Vapours to breathe out, and to detain thoſe which are mild and thick.

Q. *What ſuppurative Medicines do you uſe?*

A. Of ſuppurative Medicines there are two Ranks; of the firſt, is *Adeps humani, anſeris, gallin. Butyr. Ol. olivar. fic. ſem. lini & fœnugrec. Malv. farin. tritici. rad. fill. alb.* &c. Of the ſecond ſort are, *Gum. Galban. Ammoniac. Elemi, pix Burgund. & Naval. Croci, Cæpe toſt. ol. Cham. adeps Can. & Urſi, Empl. è Mucilaginibus, Diach. cum gumm,* &c. of which Suppuratives may be framed at pleaſure: Or (for Example) ℞ *Rad. Lilior. alb.* ʒiij. *cæpar. coct. ſub cineribus* ʒij. *ſummit. altheæ* Mij. *fic. ping. toſt.* N°. vi. *coq. & contuſ. adde far. tritici.* ʒij. *pulv. ſem. lini* ʒj. *axung. porcin.* ʒij. *ol. Lilior. q. ſ. cum vitel. ovor.* N°. ij. *Croci* ʒſs. *fiat Cataplaſm.*

Q. *How do you know when a Tumor is come to full Maturation?*

A. (1.) The Tumor by contracting it ſelf, ſeems leſs than it was in the State. (2.) It draws it-

itſelf to a Point. (3.) Hardneſs and Tenſion are much abated. (4.) By preſſing with the Finger, we may feel the Matter fluctuate. (5.) The Patient feels much Eaſe. (6.) The Heat ceaſeth. (7.) The inflamed Part (eſpecially at the Point) will become white. (8.) The *Cuticula* will be ſhrivell'd.

Q. *Why ſhould Contraction be a Sign of Suppuration?*

A. Becauſe whilſt natural Heat concocts the Matter, Vapours are raiſed by the Heat, and ſo the Part is diſtended; but when the Matter is concocted, the Elevation of Vapours ceaſe, and the Tumor a little falls.

Q. *Why ſhould drawing to a Point be a Sign?*

A. Becauſe when Nature overcomes the Matter, it draws it together to the Skin, and having conquer'd her Enemy, expels him.

Q. *Why ſhould the Abatement of* Hardneſs *and* Tenſion *be a Sign?*

A. Becauſe Suppuration being procured, many Vapours are diſcuſſed, which before ſtretched the Skin, and made it hard.

Q. *Why ſhould the Patient's Eaſe be a Sign?*

A. Becauſe the ſharp Vapours are reſolved, and the Matter being well concocted, makes the Parts more looſe.

Q. *How will you open an Apoſtem come to full Maturation?*

A. Two ways. (1.) By *Inciſion.* (2.) By the *Potential Cautery.*

Q. *Which do you eſteem the beſt?*

A. The Potential Cautery gives the moſt large and certain Diſcharge; but in Apoſtems of the Face, they are to be ſhunned, becauſe of the Scars they leave behind them: but in other Places I uſe them, in large Tumors, or to ra ify timorous

timorous Patients, who will not admit of Inciſion.

Q. *What is the Potential Cautery compos'd of?*

A. Soap-Lees, and unſlaked Lime, mixed to the Conſiſtence of an Unguent; or black Soap and unſlaked Lime ſo mixed. Of a ſtronger ſort, and which muſt be uſed with great Caution, are *Lapis infernalis*, (mixed one third, fourth or fifth Part with black Soap, and laid on) and the Silver Cauſtick, *&c.* But either of theſe being uſed in the form of an Unguent, muſt be ſpread upon a Pledget of Lint, and laid upon the moſt ſoft and depending Part of the Tumor, with a Plaiſter of Diapalma (or ſome ſuch) all round it, to keep it from ſpreading; which it will do, leſs or more, tho' we do all we can to prevent it, therefore the Pledget muſt be made but ſmall.

Q. *How long is the Cauſtick to lie on?*

A. I allow for the common milder ſort twelve Hours; for the ſtrong, not ſo much. If you apply the Silver Cauſtick, hold one end of it between your Fingers, covered with a Rag; and having juſt wet the other end, apply it to the Part, holding it on cloſe, now and then wetting it afreſh, and in a little time you will have an Eſchar. By doing this on a particular Occaſion to a ſound Part, and managing it thus for three Hours, I have made an Eſchar without Pain; which, when it has been divided, digeſted, and ſeparated, has left a Cavity big enough to turn the end of one's Thumb in, and an Inch deep. I only hint this, to ſhew what may be done, with prudent management.

Q. *What are you to conſider when you come to open an Apoſtem?*

A. I am to be careful to ſhun *Veins*, *Arteries*, *Nerves*, and *Tendons*; if the Skin is only to be divided,

divided, the Inciſion is to be made *ſtrait*; but a Muſcle is to be cut according to its *Fibres*; and it muſt be opened in a depending Part, becauſe of giving a free Diſcharge to the Matter, which would otherwiſe be kept in, and inſinuate itſelf deeper. It muſt alſo be divided where the Part is thinneſt, to avoid Pain; the Apertion muſt be proportionate to the Tumor, and the Diſcharge according to Reaſon; not too much at once, for fear of weakening the Patient too much.

Q. *What Accidents follow the opening an Apoſtem?*

A. Fainting, Pain, and a Flux of Blood.

Q. *How are theſe to be remedied?*

A. In caſe of Faintings, give Cordials or Wine; if Pain, imbrocate with *ol. Roſar.* &c. and as for the Flux of Blood, it is to be ſtopped with *Bol. ſang. Drac. alb. ovor. acet.* &c. mixed and applied on Tents and Pledgets, with good Boulſters and Bandage over all, *&c.* and ſo let it remain 24 Hours.

Q. *How will you dreſs it after opening, if there is no Flux of Blood?*

A. If I find that the Potential Cautery has done its Buſineſs, by making an Eſchar, I take off the Cauſtick, waſh out the Salts with warm Milk or Water, divide the Eſchar, and dreſs it with warm Baſilicon, or ſome other Digeſtive, till it falls off.

Q. *What muſt be done then?*

A. Dreſs it with Baſilicon alone, or mixed with *Merc. præcipit. Rub.* or dipt in *Spir. vin.* and ſometimes if there is much Putrefaction, inject *Spir. vin. per ſe*, or mixed *cum mel. Roſar.* as I ſee occaſion: and if it be very hollow round about, be ſure to dilate it by Inciſion, or cut off the Lips, if they grow callous, *&c.* After it is well digeſted, I Mundify, Incarn, and Cicatrize.

Q. *How do you know when it is well digeſted?*

A. When

A. When the Matter is *thick, white, ſweet, even,* and leſs than it was, and the Part looks clean.

Q. *How will you* Mundify, *or* Deterge?

A. Many Surgeons have many Methods; the moſt common way is with *Ung. Apoſtolor. Ung. Baſilic. & præcipit. rub.* or *tereb. Ven. mel. Roſar. Sarcocol. Myrrh. Rad. Ariſtol. Rot. Mundificativ. Paracelſ. ex apio,* &c.

Q. *With what will you Incarn?*

A. With *Liniment. Arcæi, Gum Elemi,* &c. and ſometimes I uſe Digeſtives and Incarnatives together, as the Occaſion requires.

Q. *How do you know when it is fit to Incarn?*

A. When the Part is *very clean,* and has *little red granulated Spots* appearing in it, and a ſmall Diſcharge of Matter from it.

Q. *When is the time to Cicatrize?*

A. When the Ulcer is *almoſt incarned* even with the *Cutis*; not ſooner, leſt it ſhould heal with a *Cavity*; nor later, leſt a *deformed Scar* is produced.

Q. *With what will you Cicatrize?*

A. With *Unguent. Deſicc. Rub. Aq. Calcis,* or *dry Lint,* prepar'd out of fine Cloth, dipt in a Diſſolution of *Vit. Rom.* in Water, and dried, or *Liniment. Arcæi,* waſhed in *Aq. Calcis,* &c.

Q. *What if a* Fungus, Hyperſarcoſis, *or ſpongy proud Fleſh ariſes?*

A. I take it off with *Merc. præcipit. Rub. Allum. uſt.* and ſometimes by the Knife, *&c.* and in ſome rebellious Caſes, by the actual Cautery.

CHAP. IV.

Of a Phlegmon, *ſhewing the general Method of its Cure.*

Q. *WHat is a* Phlegmon?

A. It is a hot *Tumor*, proceeding from the *Affluxion* of Blood to any Part.

Q. *From whence is the Name derived?*

A. Φλεγμονὴ is derived from φλέγω, from whence *flagro*, to burn, by reaſon of its heat.

Q. *What is the true Cauſe of a* Phlegmon?

A. It is cauſed by *good Blood* offending in quantity.

Q. *What are the* true Signs *of it?*

A. It ſuddenly begins, and ſpeedily increaſeth; it is very hot, of a freſh Colour, is attended with great Pain, Pulſation, Tenſion, and the Veins are often very apparent, black, or ruddy.

Q. *What are its Differences?*

A. If it ſeize upon the *Meninges* of the Brain, it is called *Phrenitis*; if on the *Conjunctiva* of the Eye, *Ophthalmia*; if on the Muſcles of the Throat, *Angina*, or *Quinzy*; if on the *Pleura*, *Pleuritis*, or Pleuriſy; if on the Lungs, *Peripneumonia*; if on the Emunctory of the Heart and Liver, *Bubo*; if under the Ear, *Parotis:* otherwiſe it carries the general Name of *Phlegmon.*

Q. *What are (in ſhort) the Means of a Cure?*

A. They are two: (*viz.*) *A fit Diet*, and *proper Applications*. In the beginning I order a thin and cooling Diet, and only what is ſufficient to ſupport Nature; as, *Chicken* or *Veal-broth*, *Water-*

gruel, cooling Salads, Barley-broth, Spinage, Sorrel, Purſlain, &c. His Drink, *Small-Beer, Barley-water* made palatable with *Syr. Violar.* or *Syr. Sacchari,* and ſuch like: He muſt forbear *Wine, Eggs, Fleſh, Spices, Stale-Beer* and *Ale,* &c.

Q. *Suppoſe the Humour flows immoderately, how will you abate it?*

A. By *Phlebotomy* and *Purgation.*

Q. *What are you to conſider in* Phlebotomy?

A. The Seaſon of the Year, and Age and Strength of the Patient.

Q. *Why is Purgation of uſe here, ſince no Blood (which is the Matter of a* Phlegmon*) can be ſpent that way?*

A. Catharticks or *Purgatives,* dry the Body and deprive the Blood of Moiſture, and make it *more unapt to flow*; and by purging out ſharp Humours, which *irritate* the Part affected, the Enemy is conquered with more Eaſe.

Q. *What* Catharticks *do you uſe in this Caſe?*

A. Lenitives, as *Caſſia, Tamarind. Elect. Lenitiv.* &c.

Q. *What elſe is to be done?*

A. Diſcuſſives, (of which I gave an Account before) Defenſatives and Repellers.

Q. *What do you call Defenſatives?*

A. Theſe are ſuch as by their *aſtringent Nature, purſe in,* and contract the Veſſels, thereby hindering the Humour from flowing to the Part, and are in Nature cold and dry.

Q. *Where muſt they be applied?*

A. To the Parts contiguous, to the Joints and Parts above them.

Q. *Why ſo?*

A. Becauſe there the Veſſels are more plain and conſpicuous, and ſo apt to receive Impreſſion from the Medicine.

Q. *What*

Q. *What are your defenſive Medicaments?*

A. The more mild are, *Succ. Plantag. Roſ. Alb. Nigell. Papav. Rhead. Aq. Sperm. Ranar. Vin. Rub. Acet. Oxileum*, &c. Cloths being dipped in them, and applied, and often renewed; or the common Defenſative of *Diapalma* and *Bole*, ſpread upon Cloth or Leather.

Q. *What is Oxileum?*

A. Acetum & Ol. Olivar. commixt. The more ſtrong Defenſives are, *Bol. ver. Sang. Draconis, Ter. ſigillat. Ol. Myrtillor. Maſtic. Albumin. Ovor.* &c.

Q. *What are Repellers?*

A. Such Medicines as drive back the Humour from the Part.

Q. *What are they?*

A. Some are mild, being cold and moiſt, as *Lactuc. Cichoreum, Portulac. Alb. Ovor. Nigel.* &c. And ſome are more ſtrongly cooling, as *Cicut. Mandragor.* &c. Again, ſome are more aſtringent, cooling and drying, and repel more ſtrongly than the others. Of theſe ſome are weak, as, *Fol. Plantag. Fol. Roſ. Rub.* &c. And others are more ſtrong, as, *Bol. Cort. Granat. Vin. Rub. Allum. Galliæ*, &c. All which may be made into Cataplaſms, with *Far. Hord.* &c. Or thus, ℞ *Far. Hord.* ℥vj. *Pulv. Cort. Granat.* ℥ij. *Pulv. Balauſt.* ℥ſs. *Succ. Sedi Major.* ℥iij. *Vin. Rub. q. ſ. Coq. ad conſiſt. Cataplaſm. & in fine Coctionis adde Ol. Myrt.* ℥ij.

Q. *When are theſe to be applied?*

A. In the beginning of the *Tumor*, and ſo long as I ſee any good Effect from them.

Q. *What Miſchief comes of their untimely Application?*

A. They wrinkle the Skin, increaſe the Pain, harden the Humour in the Part, and often return it to ſome *Noble* and *Principal Part.*

Q. *How do you know when Repellers are to be applied?*

A. They are to be applied if the Patient comes whilſt the Blood is yet in the ſmall Veins; becauſe then the Humour is but little and thin; Nature is ſtrong, and the Matter is not yet ſettled: And, as I ſee Occaſion, I ſometimes apply *Repellers* and *Diſcuſſives* together.

Q. *In what Caſes are repelling Medicines* not *to be uſed?*

A. (1.) If the Part be weak, leſt its natural Heat be extinguiſhed. (2.) When there is great Pain; becauſe they would cauſe greater. (3.) When the Fluxion is violent; for then they would be fruitleſs.

Q. *Tell me (in ſhort) how you will manage it, from firſt to laſt?*

A. In the Increaſe of a *Phlegmon*, I uſe repelling Medicines, and ſometimes with diſcuſſing; becauſe until the latter end of the Increaſe, there is hopes that the Matter may be repell'd; but when the Blood is once ſlipt out of the Veins, and the *Phlegmon* begins to abate, I immediately fly to Diſcuſſives, which make the Blood thin and apt to flow, convert it into Vapours, and evacuate it by the Pores of the Skin: And if, notwithſtanding all this, there be Tenſion or Swelling, then I endeavour to procure Suppuration.

Q. *How is Matter produced?*

A. By a *natural* and *unnatural* Heat encountering together.

Q. *Why is it termed Good, if it be White?*

A. Becauſe that ſhews it to be produced of natural Heat, and is cauſed to be white by the Coats of the Veins, Arteries, Nerves and Membranes, which are in Colour white, and turns the Matter into the ſame Colour.

CHAP.

CHAP. V.

Of an Eryſipelas.

Q. *WHat is an* Eryſipelas?

A. It is a hot *Tumor*, proceeding from Choler, of a bright red Colour, tending to yellow, without Pulſation or circumſcribed Tumor.

Q. *Is Choler always yellow?*

A. For the moſt part, and in a healthful State it is; but in a *Morboſe State* it is often of ſeveral other Colours, as pale, black, *eruginous*, reddiſh, *vitelline*, &c.

Q. *Why do you call this* Tumor ἐρυσιπέλας?

A. From ἔρυσον (which the Ancients uſed to ſignify *Red*) and πέλας, ſignifying *near*. So that *it is a* Tumor *in Colour coming near to Red.*

Q. *What are the Signs of it?*

A. Great Pain and Heat; the Colour of it of a bright red, tending to yellow; it is ſmall, poſſeſſing only the Skin, and is attended with a Fever.

Q. *What is the Difference between a* Phlegmon *and an* Eryſipelas?

A. A *Phlegmon* poſſeſſeth the Skin and Fleſh under it; an *Eryſipelas* only the Skin: a *Phlegmon* is of a dark red Colour, by reaſon of thick Blood lying deep; but an *Eryſipelas* is of a bright red, tending to yellow; a *Phlegmon* ſettleth it ſelf in one Part, but an *Eryſipelas* makes red the adjacent Parts by ſpreading; a *Phlegmon* comes of Blood, an *Eryſipelas* of Choler, in which the Heat and *ſymptomatick Fever* is greater than in a *Phlegmon* alſo.

Q. *What Prognoſticks are you able to make?*

A. That which proceeds from natural yellow Choler is mildeſt; if it be driven to the outward Parts, it is a good Sign; ſo it is bad (on the contrary) if it return from the outward Parts inward: it is more dangerous in the Head than in other Parts: If it appear in Wounds, Fractures, Ulcers, *&c.* it is very often mortal, if it does not proceed from Application of too hot Medicines. If it tends to Suppuration, or if a Bone be bare, and the adjacent fleſhy Parts be poſſeſt with it, it is an ill Sign.

Q. *How is a Patient to be relieved that labours under it?*

A. By Diet, Surgery, internal Medicines, and external Applications.

Q. *How is he to be dieted?*

A. It muſt be cooling and moiſtening; Chicken-Broths with cooling Herbs, Oatmeal-Gruel, *Panada*, Spinage, Sorrel, Lettice, *&c.* His Drink, *Aq. Hordei*, Spring-Water, or Small-Beer. The Seaſon of the Year muſt be conſider'd, Sleep procur'd, and all Diſturbances of Mind ſhunn'd, *&c.*

Q. *Is* Phlebotomy *to be uſed?*

A. It is diſputable: Yet in an *Eryſipelas Phlegmonodes*, wherein Blood increaſeth the Heat, in what Part of the Body ſoever it be, a Vein is to be breathed without doubt; as alſo if it invade the Head, Neck, or Face, leſt a *Phrenitis* or *Angina* follow: But in all other Places they tell us, not; becauſe by *Phlebotomy* the Blood which remains, moves more quick, and becomes more ſubtil, that which is the Qualifier of Choler is taken away, and the Patient weakened.

Q. *What are your internal Medicines in an* Eryſipelas?

A. I give Lenitives, as *Caſſia, Elect. Lenitiv. Diacatholic. Elect. è ſucco Roſar. Tamarind. Crem. Tart. Manna*, &c. And if the Inflammation be mild, Gliſters made of the Decoction of cooling Herbs, with the aforeſaid Electuaries, may ſerve.

Q. *What are your external Applications?*

A. In theſe I muſt be cautious, not to apply aſtringent Medicines, which are cooling and drying, becauſe the Vapours in this *Tumor* are ſharp; and if they ſhould be pent in, they might *erode* and corrupt the Part: The Medicines then muſt be *cold* and *moiſt*, but not *Narcotick*, unleſs the Pain be extreme, and the Grief far from any principal Part, and *unctuous Medicines* ſtop the Pores: But I uſe Cloths dipt in *Aq. vel Succ. Umbell. Veneris, Equiſet. Plantag. Lactuc. Petroſelin. Papav.* &c. mixed with *Acetum.* Alſo, *Cerat. Refrig. Galeni, Sapo Caſtil. diſſolv. in Aq. Fontan. Aq. Sperm. Ranar. cum Aceto ex Vin. Rub.* wherein ſome *Myrrh* has been diſſolved. Alſo foment the Part with *Decoct. Salviæ cum ſapone Caſtil.* (which I have often uſed with great Succeſs) and bathe it with *S. V. Camphorat.* And here all Medicines muſt be often changed, and cut the Veſications as oft as they riſe.

Q. *How long are theſe to be applied?*

A. Till the Heat be abated, and the Skin recovers its Colour; for by uſing cooling Medicines too long, Lividneſs of the Skin, and ſometimes a Mortification is procured. If it be in the Head or Face, be very cautious in your Applications, and let them be rather Exſiccant than Repellent, till the Humour has ſpent it ſelf; Abſtinence and a cooling Regimen being here the beſt Method. And ſome uſe no local Applications at all, but leave it to Nature; but I cannot approve of ſuch a Conduct, eſpecially where the Part is raw, *&c.*

CHAP. VI.

Of an Oedema.

Q. *What is an* Oedema?

A. It is a ſoft, looſe, white, cold *Tumor*, cauſed of *Phlegm*; which, if preſs'd with the Finger, pits; and is commonly without Pain.

Q. *What is* Phlegm?

A. It is the fourth Part of the Maſs of Blood, cold and moiſt, and is either *natural* or *excrementitious*. The natural is void of any foreign Taſte, and ought rather to be called *pituitous Blood*, than *Phlegm*. Of the excrementitious or unnatural, there are three Sorts; (1.) Sour. (2.) Salt. (3.) That which ſhews like melted Glaſs; and is therefore called *Pituita*, *Vitrea*, &c.

Q. *What is the Signification of the Word* Oedema?

A. The Greeks call it, οἴδημα, the Latins *Oedema*, and (to ſpeak in a general way) is the ſame with ὄγκος, which ſignifies *bunching out*; and ſo every *Tumor* may be called an *Oedema*: *but in a more ſtrict Senſe*, and according to *modern Writers*, it is taken for this particular *Tumor* cauſed of *Phlegm*.

Q. *What Prognoſticks can you make relating to it?*

A. It is commonly *a continuing Diſeaſe*, becauſe the natural Heat in the Part it affects, is weak; but *it is not of it ſelf dangerous*, becauſe it is *moſtly* without Pain; but in conſumptive and dropſical Habits, it is of ill Conſequence; not as it is a Diſeaſe, but as it ſhews the Decay of the natural Heat.

Q. *How*

Q. *How will you perform its Cure?*

A. It is performed by Diet, internal Medicines, and local Applications.

Q. *What Diet would you adviſe your Patient to?*

A. Always to that which is drying, and to that which is roaſted rather than boiled; Fiſh, Hogsfleſh, Heads, Brains, Feet of Beaſts, and Sallads of cold Herbs, are all hurtful; but eat *Biſcuit*, or Bread well baked, with Veal, Pullet, Rabbit, Chicken, *&c.* and daily drink Wine in Moderation, and a Decoction, or Ale of *Guaiacum*, *China*, *Saſſafras*, *Sarſa*, *Ginger*, *Cinnamon*, &c. and ſweat upon it. Be ſparing in Diet, but labour, ſtudy and watch, beacuſe theſe dry the Body. If it poſſeſs the Hands, Walking is good; but if the Feet, then ſit much, and work with the Hands.

Q. *What do you preſcribe internally?*

A. Antimonial Medicines are good, and to be uſed as Occaſion offers; alſo purge with *Pil. Cochiæ*, *de Hiera cum Agarico*, *Pulv. Diaturbith. cum Rhabarb. Diaſenæ*, *Cornachin. Pil. ex Duobus*, *Elect. Cariocoſtin.* &c. with *Calomel*, which is a ſafe Method, carefully uſed.

Q. *What think you of* Phlebotomy *in this Diſeaſe?*

A. In a true *Oedema* I do not like it; becauſe, (1.) In Bodies *cold* and *moiſt*, as are thoſe which are *Oedematous*, we never do it, except there be a *Plethora* too. (2.) The *Matter* is not *malignant*; for which Reaſons I forbear it.

Q. *What are your local Applications?*

A. The Part is to be rubbed well with a Cloth, to open the Pores for the Medicines to penetrate: Then uſe Bay-Salt *cum Ol. Olivar.* or Brandy, or Bay-Salt with *Spaniſh* Wine, or the Patient's Urine. But in the State of the *Tumor*, when it is large, uſe this Fomentation, or ſuch like, ℞ *Fol. Abſinth. Abrotan*, *Calaminth. Origani*, *Pulegii*, *Sambuci*,

Sambuci, Chamæmel. Salviæ, Rutæ, ana Mj. *Bacc. Lauri & Juniperi ana* ℥j. *Sem. Fœnic. dulcis, Carui, Cymini, ana* ℥ſs. *contundantur craſſ. modo. & in Aq. Font. q. ſ. bulliant ad dimid. partis conſumptionem, Colaturæ, & adde S. V. q. ſ. & fiat Fotus.* And then uſe good Bandage, either by Rolling, laced Stocking, Sleeve, Truſs, or Glove. After fomenting, you may embrocate with *Ol. Laurin. Rutæ, de Caſtoreo, ana* ℥ij. *Sal. Marini* ʒij. Ms. And apply this Cataplaſm; ℞ *Farinæ Fabar. Hordei ana* ℥vj. *Summit. Abſinth. Rutæ, Origani, Abrotani pulv. ana* ℥ſs. *Flor. Sambuc. Chamæmeli, Roſ. Rub. pulv. ana* ʒiij. *coquantur in prædict. fotu ad Cataplaſmatis conſiſtentiam addendo ſub finem Aluminis & Sulph. vivi ana* ℥j. *Ol. Rutæ & Mellis q. ſ.* Or if you would rather uſe a Plaiſter, *Empl. de Sapone* and *Diaſulphuris*, are proper Diſcutients here. With which *Fotus* the Part may be fomented, or large double Cloths wet in it, and apply'd over the whole Member; and with a fit *double-headed Roller*, make good Bandage: or if in the Knee, or Leg, fit on a laced Knee-Piece, or Stocking, by which the Humour will be ſent from the Part affected, to thoſe adjacent, and ſo the more readily carried off by Internals.

Q. *What Parts of the Body does this* Tumor *generally poſſeſs?*

A. The Hands and Legs, becauſe they are the fartheſt from the Heart, which is the Well-ſpring of Life, and alſo becauſe they are framed of cold Parts.

Q. *What Tumors are referred to an* Oedema?

A. Six: *viz.* Three which are contained in a *Cyſtis*, and three which are without; that is to ſay, (1.) *Atheroma.* (2.) *Steatoma.* And (3.) *Meliceris.* Theſe three are contained in a *Cyſtis*; and the other three, which are not ſo contained, are

are theſe, (1.) *Pſydracium*, (2.) *Ficus*, and (3.) *Talpa*.

Q. *How will you know an* Atheroma?

A. It has a Subſtance *like Curds* or *Rice Milk*; it proceeds from thick and groſs Phlegm.

Q. *How will you know a* Steatoma?

A. It is not ſo big as *Atheroma*, and *contains a Matter like unto Greaſe*, or a Sweetbread-like Subſtance.

Q. *How will you diſcern a* Meliceris?

A. It contains a Matter *reſembling Honey*, and is bred of thin Phlegm mingled with ſome Choler.

Q. *How do you diſtinguiſh a* Pſydracium?

A. It is a pointed white Puſtle, containing a wateriſh Humour.

Q. *What is a* Ficus?

A. It is called *Ficus*, becauſe its Roots reſemble that of a Fig; and its inner Subſtance is like that of a Fig alſo.

Q. *What is a* Talpa?

A. It is ſo called, becauſe as Moles heave up the Ground, ſo this Tumor lifts the Skin from the *Pericranium*, and is larger than a *Ficus*.

Q. *Is no other Tumor to be added to theſe?*

A. Modern Authors add one they call *Nata*, which is large, and is ſo called becauſe it reſembles the Buttocks, called *Nates*; is without Pain, conſiſts of *pituitous* Fleſh, ſeated moſt commonly in the Neck, and is only cured by Exciſion.

Q. *What is* Ganglium, *and* Lupia, *Tumors ſo called?*

A. They are round Tumors of the nervous Parts without Pain, only *Ganglium* is hard, *Lupia* ſoft. *Lupia* may be moved every way, but *Ganglium* only towards the Sides, *&c.*

CHAP. VII.
Of a Scirrhus.

Q. *What is a* Scirrhus *Tumor?*

A. It is a *Tumor* cauſed of Melancholy, or tough cold Phlegm, hard, fixt, and without Pain: If it wholly comes of Melancholy, it is of a Lead Colour; but if of Phlegm, it does not change the Colour of the Skin.

Q. *What is Melancholy?*

A. The fourth Humour in the Maſs of Blood; yet natural, cold and dry.

Q. *Why is this* Tumor *hard?*

A. Hardneſs is the Offspring of Cold, Dryneſs, too great Repletion, or a Combination of all theſe together.

Q. *Why is it without Pain?*

A. (1.) Becauſe the *animal Spirits* cannot paſs through an Humour ſo *glutinous*, as that which cauſeth a *Scirrhus*: Or, (2.) becauſe it is benumbed with the Coldneſs of the Humour.

Q. *Wherein does it differ from other* Tumors?

A. Herein it differs: A *Phlegmon* is attended with Pain; an *Eryſipelas* is not hard; an *Oedema* yields to the Touch, and pits. *Wateriſh Tumors* have a thin clear Matter: And from a *Cancer* particularly, it differs in theſe Reſpects; a *Cancer* is ever painful, *this* not at all; a *Cancer* is hot, *this* cold; a *Cancer* ſeizes the looſe and flaggy Parts, *this* the hard ones, as Joints, Tendons, and Ligaments; in a *Cancer* the Veins appear full and black, here not ſo.

Q. *What are the Prognoſticks in a* Scirrhus?

A. An

A. An *exquiſite Scirrhus* is incurable; and one leſs exquiſite, though it is ſeldom mortal, hardly admits any Cure, *or with much Difficulty:* A *Scirrhus* from Melancholy only, is warily to be managed, for fear it ſhould degenerate into a *Cancer*; but with that which is cauſed of Phlegm, you may be more bold.

Q. *Why is an exquiſite* Scirrhus *incurable?*

A. Becauſe the Part is deprived of the Influence of the *animal Spirits*, and the Faculty it ſelf is ſo ſtrangled, that it cannot help the natural Heat to concur with Means which may be uſed, *&c.*

Q. *What are the Indications of Cure?*

A. Diet, internal Medicines, and local Applications.

Q. *Is Phlebotomy profitable in a* Scirrhus?

A. If the Veins be full, the Blood black, and Age and Strength permit, it is by all means to be performed, becauſe the Quantity being leſſened, the natural Heat will with more eaſe rule the reſt.

Q. *What is the Dietetick Cure?*

A. All their Meat muſt be of an *eaſy Digeſtion*, moiſt, and of a *thin Juice*, as Chickens, Pullets, Lamb, Veal, Rabbets, Sallads, Spinage, *&c.* Their Drink, ſmall Wine, Cyder, or reaſonable ſtrong Beer. All ſalt Meats dried in the Smoak, Veniſon, coarſe Bread, *&c.* are hurtful.

Q. *What are your internal Medicines?*

A. Such as purge Melancholy and Phlegm; as *Confectio Hamech. Pil. de Lap. Lazuli, Extr. Helleb. Nigr.* given in Decoctions of *Sena*, *Polypody*, &c. theſe for Melancholy; and to purge Phlegm, give *Pil. de Agaric. & Hermodact. Diaturbith.* &c. But it is thought, that nothing is better than conſtantly taking a Diet-Drink of *Sarſaparilla*, *China*, *Guaiacum*,

Guaiacum, &c. inſtead of common Drink, and ſweat every Morning well upon it.

Q. *What are your external Applications?*

A. Not repelling; becauſe the Humour is thick and hard, and ſo unfit for Motion: but they ought to be *diſcuſſing* and *emollient*; and not *Emollients* alone, for thereby a *Scirrhus* is exaſperated, and ſo will be apt to turn cancerous; *Unguent. Dialtheæ, Ol. Lilior. Adeps Human. Anſeris, Empl. Diach. cum Gum. è mucilaginibus, Gum. Bdellii, Ammoniaci, Galbani*, &c. And before you apply any of theſe, foment the Part with *Decoct. Malv. Flor. Cham. Melilot. Sambuci, Sem. Lini, Fœnugrec. Rad. Altheæ*, &c. *cum aceto, & adde Sp. Vini q. ſ.* And in dry Bodies, and where the *Scirrhus* is more confirmed, and fixed amongſt the Tendons, the Fume of Vinegar, ſprinkled upon a hot Stone, often repeated, has its uſe herein.

Q. *Having briefly received Satisfaction, as to a* Phlegmon, Eryſipelas, Oedema, *and* Scirrhus, *which take their Original of the four Humours in the Maſs of Blood,* (viz.) *Blood, Choler, Phlegm, and Melancholy: Now give me your Thoughts of* Aqueous Tumors?

CHAP. VIII.

Of Aqueous Tumors.

A. *Aqueous Tumors* are produced of the Superfluity of the *Serum* of the Blood, after it has performed its Office; which moving the *expulsive Faculty*, part of it is sent to the Skin, which causes these *Tumors*.

Q. *What is this* Serum?

A. It is a Salt *Aqueous Humidity* contained in the Blood; which cannot be discerned, till the Blood, growing cold, this thin part is separated from the thicker by *Concretion*.

Q. *What Quantity of this* Serum *is there in the Blood?*

A. In a healthful Person the Quantity is but small, and no more than is fit to make thin the Blood, that it may with more ease pass to all Parts of the Body to afford them Nourishment; and this *Serum* has the same Matter with *Urine* and *Sweat*.

Q. *What is Urine?*

A. It is nothing more nor less than the Superfluity of this *Serum* mixed with the *Aqueous Humidity* of Meat and Drink, separated from the *Sanguineous Mass* by the attractive Faculty of the *emulgent Veins and Kidneys*, and by the *Ureters* sent to the Bladder.

Q. *How is the Superfluity of* Serum *sent to the Habit of the Body?*

A. Partly because the Weakness of the Kidneys will not suffer them sufficiently to draw it; partly because the Liver is too cold; and partly from Immoderation in drinking of Water, Wine, Ale,

Ale, Cyder, &c. *See my mechanical Eſſays on the animal Oeconomy*, &c.

Q. *What are the Signs of an* Aqueous Tumor?

A. It is ſometimes leſs, ſometimes bigger; yields when it is hard preſſed, is not painful, does not pit, and is attended with an itching in the Part, by reaſon of the Saltneſs contained in the Humour. If they lie externally, they appear reſplendent; and if they be deeper, and are ſhaded by the Hand and a Candle in a dark Room, a faint Tranſparency may be perceived: Thoſe that are contained in a *Cyſtis*, if the Tumor be large, an Undulation may be perceived, if they are ſhook, *&c.*

Q. *How will you perform the Curative Part?*

A. By convenient Diet, internal Medicines, external Applications, and manual Operation.

Q. *What is your Dietetick Method?*

A. Eat Roaſt-Meat rather than boil'd; ſhun all Immoderation in Drink; Fleſh is better than Fiſh; and that is beſt to be of Kid, Veal, Rabbets, Land-Fowl, Biskets, and Bread well-baked, *&c.* ſhunning all Spoon-Meat whatſoever.

Q. *What internal Medicines do you uſe?*

A. They are of three ſorts, (*viz.*) ſuch as purge by Stool, by Urine, or by Sweat and *inſenſible Perſpiration.*

Q. *What are your* Catharticks, *or ſuch as purge by Stool?*

A. Elaterium, Gutta Gamba, Pil. de Euphorbio, Cochiæ, Rad. Jalap. Mechoachan. Syr. è Spin. Cerv. Rad. Eſula Maj. &c.

Q. *What are your* Diuretical *Means, or ſuch as provoke Urine?*

A. Syr. Altheæ, è quinque Radicibus, &c. *Sal Prunel. Rheniſh Wine* ſtrained through *Broom-Aſhes, Sal Geniſtæ, Spir. Juniperi, Spir. Nitr. Dulc.* &c.

Q. *What are your* Sudorific *or ſweating Medicines?*

A.

A. Decoct. Guaiaci, Sarſaparil. Saſſafr. Agrimon. Beton. Sem. Fœniculi, Coriandr. Aniſi, &c. Give it often, as the Patient can bear Sweating; and give it warm.

Q. *What are your external Applications?*

A. They ought to be *ſuch as diſcuſs and rarify the Skin,* that a Breathing may be given to the *impacted Humour*; as *Fol. Malv. Farin. Lupinor. Ol. Anethi, Cham. Vin. Alb. q. ſ.* Of which make *Cataplaſms.* Alſo Muſtard, and Nettle-Seeds, Brine, *Ammoniacum, Bdellium, Ol. Olivar. Vet. Ceræ,* &c. Of which, according to Judgment, make Cerats. But, before the Application of this or any other Medicines, the Part is to be *well fomented* with a ſtrong *Lixivium* made of *Broom-Aſhes, Abſinth. Centaur. Calamint. Bacc. Lauri, Sem. Cymini, Fol. Scordii, Flor. Cham. Melilot,* &c. and then embrocate the Part with this, ℞ *Sal. Nitri* 3x. *Piperis Alb.* 3vj. *Euphorb.* 3ij. *Ol. Laurin.* ℥vj. *miſce.* And if after all, the Cure ſucceeds not, an *Apertion* muſt be made, to diſcharge the Water: But in an *Aſcites,* which is commonly the Product of ſome Chronical Diſtemper, which took its original from Obſtructions of the *Viſcera,* Tapping ſometimes has, but often has no good Effect: And (if the *Viſcera* are corrupted) it commonly haſtens the Patient's Death; eſpecially if too much Water is let out at once.

Q. *What are the Differences of* Aqueous Tumors?

A. Thoſe in the Head are called *Hydrocephalus*; if in the Belly, *Aſcites*; and if in the Cod, or *Scrotum, Hydrocele,* or *Hernia Aquoſa.*

Q. *How do you perform the manual Operation?*

A. It is done either by Inciſion or Cauſtick, which muſt be in a depending Part, and muſt be kept open by a Pipe of Lead or Silver; and laſtly, cured as other *Tumors,* according to the Artiſt's Judgment.

CHAP.

CHAP. IX.

Of the King's Evil.

Q. *What is a* Scrophulous *Tumor?*

A. It is an hard *Tumor* of the *Glands*, incloſed in a *Cyſtis* of its own, bred of thick Phlegm.

Q. *How is it called?*

A. In Latin, *Scrophula*, and *Struma*; in Engliſh, *The King's Evil.*

Q. *Why is it call'd*, The King's Evil?

A. Becauſe the Cure of it has been reported by People of a ſtrong Faith, to be a particular *Gift of GOD* to the *Kings* and *Queens* of *England*, that are lineally deſcended from the *Blood-Royal*, who cure it by their Touch; tho' where that cannot be had, it comes under *Chirurgical Conſiderations*, which is undoubtedly the moſt certain way of Cure. For as to the *Royal Touch*, it ſeems to me to be much of the nature of that of a *Seventh Son*, and both depend merely upon Faith, or Fancy; and that's the Reaſon (I preſume) that Children and Folks of ſmall Faith, often miſs'd of a Cure in former Days.

Q. *What are its Differences?*

A. Sometimes it is lodged in *many Knots*, ſometimes *in few*; ſometimes *large*, ſometimes *ſmall*; ſometimes *mild*, ſometimes *malignant*; one is moveable, another not; ſome have Veins, Arteries and Nerves, others none, *&c.*

Q. *How do you diſtinguiſh it?*

A. I diſtinguiſh it from a *Gland*, becauſe that is ſoft, and without Pain; is ſingle, and ſlips when preſſed, and returns again, and is generally *cutaneous:*

cutaneous: But *the Evil* (on the contrary) if touched, feels hard and is painful, and generally consists of many Knots, and lies deep. It is known from a *Ganglium*, for that is only in a *nervous Part. Nodes* are separable from the subjacent Parts, and breed in any; but the *Evil* sticks fast to the Flesh, and is generally in a *glandulous Part.*

Q. *What are the Prognosticks?*

A. (1.) Every *Scrophula* is difficult of Cure, because it is hard, it is contained in a *Cystis* of its own, and comes from a gross Humour. (2.) The painful is more difficult than that without Pain. (3.) The fixed worse than the moveable. (4.) It is more difficult in the forepart of the Neck than any where else. (5.) It sometimes turns *Scirrhous* or *Cancerous.* (6.) It generally seizes Children, but seldom on grown Youths or Men; wherefore when it does so, it is the more difficult of Cure. *See Mr.* Wiseman's *Surgery, who has treated largely and learnedly about it.*

CHAP. X.

Of Ulcers *in general.*

Q. *What is an* Ulcer?

A. It is a *Solution of Unity* with loss of Substance in any Part, either proceeding from an inward Cause *eroding* the Part, or from some external Force making a Wound, *&c.* which in process of Time *degenerates* into an *Ulcer.*

Q. *How is it called?*

A. In Latin *Ulcus*, in Greek ἕλκος, ἀπὸ τοῦ ἕλκεσθαι, because it disjoineth the Part it possesseth; and

ſo, in general, this Term comprehends every Solution of Continuity.

Q. *What are the Differences of* Ulcers?

A. Ulcers are of two ſorts, *viz. Simple* and *Compound*; now I call that a *Simple Ulcer*, which hath neither a Diſeaſe, Cauſe, nor Symptom joined to it, or complicate, beſides the Solution of Unity; but in a *Compound Ulcer*, either ſome of theſe, or all, are found.

Q. *What are your Prognoſticks in the Cure of* Ulcers?

A. In a Perſon of a good Complexion it is eaſy of Cure, and in a bad one the contrary; in *Moiſt* and *Hydropical Bodies*, in aged Perſons, in Children, and in Women with Child, they are difficult of Cure: Thoſe in the *Spondils of the Back* and great Joints, are moſt commonly mortal; thoſe of a *round Figure* are more difficult of Cure than thoſe of any other form: in *Hectick* and *Hydropick Perſons* they are hardly curable; if the Bone be *foul*, and the Ulcer *livid*, it is a bad Sign.

Q. *How will you know when a Bone is foul?*

A. (1.) If the *Ulcer* has been of long ſtanding. (2.) If it has been cicatriz'd and breaks out again. (3.) If it yields more and thin Matter than the bigneſs of it requires. (4.) If the Brims of the *Ulcer* will not contract. (5.) If on the ſight of the Bone it appears black, diſcoloured or rugged: And, (6.) If it does not yield to rational Applications.

Q. *How do you diſcern the* Times *of an Ulcer?*

A. In the beginning the Matter is *wateriſh* and *thin*; in the Increaſe, it flows more ſparingly but thicker; in the State there is no *Ichorous* Matter but *Pus*, yet it looks ſomewhat thinner; and in the *Declination*, *Laudable Pus* appears.

Q. *What is* Laudable Pus?

A. It

A. It is white, uniform, and without ill ſmell.

Q. *How is the Cure of an* Ulcer *performed?*

A. (1.) By removing the Cauſe. (2.) By artificial Dreſſings.

Q. *What are the Cauſes?*

A. Generally a *Cacochymia*, and the *Diſtemperature* of the Part: The firſt has been ſpoke to before, in the Doctrine of *Tumors*; and the Diſtemperature of the Part is to be removed by things contrary to it; and in order to it, a *convenient Diet* muſt be preſcribed.

Q. *How muſt it be dreſt*, according to Art?

A. In the beginning, *Digeſtives* are to be applied.

Q. *Why ſo?*

A. (1.) Becauſe the Matter which has left the Veſſels, and has inſinuated itſelf within the *Poroſities*, corrupts; wherefore it muſt be concocted, that it may become *Laudable Matter.* (2.) Fleſh will not generate, nor can *ſarcotical* Medicines take place, unleſs the Matter be concocted.

Q. *May* Digeſtives *be applied to all* Ulcers?

A. No: (1.) Not to *Putrid* Ulcers, for Digeſtives being hot and moiſt, would here cauſe the greater Putrefaction. (2.) Not to *Rheumatick* Ulcers, for Digeſtives relax the Part, and make it more ſubject to receive the Matter that flows.

Q. *What is to be done next?*

A. Repelling Medicines are to be applied about the *Ulcer*, to repel the Matter that flows. (1.) To prevent Fluxion from the Parts adajcent. (2.) To ſtrengthen them, that they may reſiſt Fluxion. (3.) To further the Deſiccation of the *Ulcer.*

Q. *What are the Digeſtives?*

A. Pic. Reſin. Cera, Unguent. Baſilic. Aureum, &c. *cum Mercur. Præcipit. Rubr. Far. Tritic. Hordei*, &c.

Q. *What are your Repelling Medicines?*

A. Succ. Cydonior. Plantag. Acet. Vin. Rub. Fol. Roſ. Rub. Ol. Myrtil. Maſtic. Unguent. Alb. Ter. Sigillat. Far. Fabar. &c. Of Emplaiſters, *Empl. de Minio, de Sapone, Diapalma, Diacalciteos,* &c. with proper Bandage.

Q. *What is next to be done?*

A. After good Digeſtion, I *mundify* or *cleanſe*; for if we apply *incarnative Medicines* before the *Ulcer* is well digeſted and cleanſed, *ſpongy Fleſh* will grow in ſpite of all Endeavours; and ſo by conſequence we cannot *cicatrize.*

Q. *How will you know when an* Ulcer *is well digeſted?*

A. If the *Quittor* is pretty laudable, and if the Edges of the *Ulcer* is well coloured and ſoft, *&c.*

Q. *What are your* mundifying *Medicines?*

A. Rad. Ariſtol. Rot. & Long., Virid. Æris, Merc. Præcipit. Rub. Mel. Succ. Apii, Mundificativ. Paracelſ. & ex Apio, Unguent. Apoſtolorum, Unguent. Baſilic. cum Mercur. Præcipit. Rub. &c.

Q. *How will you know when an* Ulcer *is ſufficiently mundified.*

A. When I ſee it appears red, ſenſible, clean, and neither too dry nor too moiſt.

Q. *What more is to be done?*

A. I am next to *Incarn,* or fill with Fleſh.

Q. *What Medicines will you make uſe of?*

A. Maſtich. Myrrh. Sarcocol. Gum Elemi, Tereb. Venet. Thus, Oliban. Liniment. Arcæi, Unguent. Aureum, &c.

Q. *What Rule is there in compounding of them?*

A. They muſt not be either too ſoft nor too hard; for if they be too hard, the weak Part cannot well have the Benefit of them; and if they be too ſoft, the Heat of the Part will cauſe them to ſpread, and breed a *Fungus.*

Q. *But*

Q. *But ſuppoſe a* Fungus *ſhould ariſe, how will you abate it?*

A. Then I uſe either *ſtrong Deſiccatives, Cathereticks,* or *corrupting Medicines.*

Q. *How do you time the Application of theſe?*

A. If the *Fungus* be ſoft, and but beginning, I uſe ſtrong Deſiccatives only; ſuch as, *Ter. Sigillat. Lemnia, Bol. Aloes, Croc. Martis, Minium, Ceruſſa, Litharg. Auri, Alum. Vit. Rom.* &c.

Q. *But ſuppoſe you find theſe not powerful enough?*

A. Then I uſe *Cathereticks*; theſe burn, but gently, being hot and dry in the fourth Degree, and only ſuperficially dry, and corrode the Fleſh; (*viz.*) *Alum. Uſt. Virid. Æris, Merc. Præcipit. Rub. Turb. Miner. Unguent. Apoſtolor. Ægyptiac.* &c.

Q. *If the* Fungus *be ſo hard and compact, that it reſiſts theſe Medicines, what muſt then be done?*

A. In this Caſe ſome uſe *Eſcharoticks*, ſuch as *Lapis Infernalis*, and the Lunar Cauſtick; but theſe are dangerous Medicines, and ought to be managed by a skilful Hand; alſo *Merc. Sublimat.* mix'd with calcin'd *Roman Vitriol*, and *Ter. Sigillat.* or *Turb. Min.* mingled with the ſame; *Ol. Vit. Ol. Sulph. Aq. Fortis*, &c. and the *actual Cautery*; all which are attended with Pain and Difficulty, and ought never to be uſed but in *urgent Neceſſity* and with *great Caution*; but rather uſe *Fallopius's Catheretical Lint*, (viz.) ℞ *Aq Plantag. Roſ. Solani, ana* ℥iv. *Opii* ℈j. *Medul. Panis* ℥ij. *Merc. Sublimat.* ℈iv. *ſuper Porphyr. trit. omnia hæc commixta bulliant ad Conſumpt. Med. dein colent per pannum Craſſiuſculum. Fila excerpta bulliant aliquandiu in hoc liquore, poſtea eximantur, ſiccentur, ac ſerv. ad uſum.*

Q. *We will now ſuppoſe the* Fungus *removed, but what will you do next?*

A. I muſt next endeavour to *cicatrize*, or skin the *Ulcer*, if it be filled up nearly ſmooth.

Q. *How is this performed?*

A. By *Epuloticks*; as *Ter. Sigillat. Æs uſtum, Minium, Ceruſſ. Empl. Diapalm. Unguent. Deſic. Rub. Empl. de Minio——Unguent. Alb. Camph. Aq. Calcis, Unguent. Diapomph. Vitr. Rom.* and Dr. *Turner's Ceratum ex lapide Calaminar.* &c. the *Recipe* of which I here communicate, (*viz.*) *Butyr. Maii ſine ſale, & Ceræ flav. puriſſ. ana* ℥xiv. *Ol. Olivar. opt.* ℔j. *Lap. Calaminar. Pulv.* ℥x. ℥ij. Ms. *Fiat Cerat.* S. A.

Q. *At what Time are* Epuloticks *to be applied?*

A. Before the Fleſh is even with the Skin, or whilſt there is ſome Cavity; for if this be not minded, the *Cicatrize* is apt to be higher than it ought, and ſo would cauſe a Deformity.

Q. *You have given me the Signs of a corrupt or foul Bone; pray tell me* how you will exfoliate or ſcale it, *in order to cure the* Ulcer, *and then we will proceed to particular* Ulcers?

A. Firſt, the Bone is to be laid bare; and, 2dly, the ſcaling, or exfoliating of the Bone, is to be effected by proper Means.

Q. *How is the Bone to be laid bare?*

A. Three Ways; (1.) By Inciſion. (2.) By the Potential Cautery; as *Lapis Infernalis*, the Lunar Cauſtick, *&c.* Or, (3.) By Dilatation, inlarging the *Ulcer*, tho' the Bone appears but a little: And this is done by *Spunge dipt in ſome Melilot-Plaiſter*, and preſs'd hard till it is cold, and then cut out into Tents; alſo Tents made of *Gentian*, or Pith of Elder.

Q. *Are either of theſe to be uſed to all Parts indifferently?*

A. No: The Potential Cautery is not to be uſed, where many Nerves or Tendons are, leſt they

they cauſe (by their great Pain) *ſymptomatical Fevers* and *Convulſions*; but they are rather to be applied where there is a *Caries* of the *Ulna* and *Tibia*. Dilatation is to be uſed where Inciſion or the Potential Cautery may not; (*viz.*) On the back of the Hand, Inſtep, and *Metatarſus*; nor may Inciſion be uſed at all *where Bones lie deep*, and have Veins, Tendons, and Arteries above them.

Q. *The Bone being bare, how is it to be exfoliated?*

A. By Medicines, Inſtruments, or actual Cautery.

Q. *What are your* deſquamatory *Medicines?*

A. They ought to be very drying; and if the *Caries* be only ſuperficial, thoſe of the firſt ſort may ſerve; as, *Pulv. Myrrh. Rad. Ariſtol. Rot.* &c. And if the *Carioſity* be ſomething deep, a ſecond ſort muſt be uſed; as, *Rad. Pucedan. Euphorb. Aloes*, &c. And if the *Caries* be very deep, we muſt uſe *Tinct. Euphorb. Ol. Caryoph. Ol. Sulph. Vit. Rom. Calcinat.* &c.

Q. *If it be done by Medicines, how long Time will it require?*

A. If they be rightly applied, about forty Days will do the Work.

Q. *But ſuppoſe the* Caries *will not yield to Medicines, what then?*

A. Then we muſt have recourſe to Inſtruments; the principal of which is, *Mallet*, *Chiſſel*, and *Raſpatory*; the *Caries* is to be taken off with the two firſt, and the Bone to be ſmoothed by the laſt: And then ſome of the former *deſquamatory Medicines* muſt be applied; but if *both Tables* of the *Cranium* be foul, we muſt uſe the *Trepan:* The Uſe of which ſhall be treated of in another Place.

Q. *How is the Bone to be ſcaled by* actual Cautery?

A. The *Cautery* is to be *red-hot*; and, if the Bone lie deep, it is to be conveyed to it *through a*

Pipe of Iron; and, if it be ſuperficial, the Parts are to be covered by double Implaiſter, to prevent their being burnt.

Q. *May it be applied to any Part?*

A. No: Not to the *Scull*, nor *Vertebræ* of the Back; becauſe of hurting the Brain in the one, and the *Spinalis Medulla* in the other.

Q. *How is the Bone to be dreſs'd after Cauterizing?*

A. For ſome few Dreſſings, to hinder Inflammation, uſe *Aq. Roſar.* and *Alb. Ovi*; and then apply to it *exfoliating Medicines*. Some uſe for the firſt three Days, *Ol. Roſar. cum Alb. Ovi*; and for three other Days, *Ol. Roſar. & Vitel. Ovi*; and afterwards, *Butyr. cum Mel. Roſar.* and over that *ſome Deterſive:* And continue this Method till the Bone ſcales; and afterwards Incarn and Conſolidate with *Rad. Ariſtol. Iris, Myrrh.* and ſuch like.

Q. *What do Surgeons mean by* Sordes, Ichor, *and* Sanies, *in* Ulcers?

A. The Excrement which they call *Sordes*, is thick and glutinous; that which they call *Ichor*, is thin and wateriſh, like to Water wherein Fleſh has been boiled, having received no Alteration, but has flowed pure, as it is in the Veins and Fleſh. *Sanies*, or *Virus*, is thin alſo, but has received ſome Alteration, by the Temperature of the Part.

CHAP.

CHAP. XI.

Of a Simple, Plain, and Hollow Ulcer.

Q. *IN the laſt Chapter, you told me the Difference between a ſimple and compound* Ulcer; *pray tell me now, how many Kinds of ſimple* Ulcers *there are?*

A. Two: The one is plain, and equal to the natural Skin, and wherein only the *Cutis* and *Cuticula* are loſt; the ſecond is hollow, wherein beſides the *Cutis* and *Cuticula*, part of the Fleſh is gone alſo.

Q. *How will you effect the Cure?*

A. One Method ſerves for both. If the Blood be not pure, it is to be altered; as, if it be *too thin*, *thick*, *hot*, or *cold*; if it offends either in *Quantity* or *Quality*, the Patient is to be managed accordingly; the *Non-naturals* are to be diſcreetly orderly, and the Patient kept in a due Temper, *&c.*

Q. *What are the* Non-naturals?

A. (1.) Exceſs in Eating or Abſtinence. (2.) Too much Motion or Reſt. (3.) Too much Sleep or Watching. (4.) Too much Evacuation or Retention. (5.) Too much Perturbation of Mind. (6.) The Air too hot, cold, dry or moiſt.

Q. *What are the Prognoſticks in ſimple* Ulcers?

A. The Cure becomes difficult or eaſy, according to the Nature of the Part ulcerated, and the Diet of the Patient. They are more eaſily cured in a *fleſhy Part*, than in a *Joint* or *Nervous Part*; ſo more eaſy in a *temperate Perſon* than in one given to *Debauchery*.

Q. *What*

Q. *What is your Method of Cure?*

A. Digeſt with *Terebinth. lot. in Aq. Font. & adde Vitell. Ovi*, or any Digeſtive in uſe, according to Occaſion: Or you may both digeſt, deterge, and incarn, by *Unguent. Baſilic.* alone, or mixed with *Liniment. Arcæi, & Merc. Præcipit. Rub.* in fit Quantities; and over this, *Emplaſtr. de Minio, Diapalma* or *Diacalciteos*; and, if need be, a Cloth wrung out of red Wine, over all. When it is well digeſted, mundify, incarn, and cicatrize, as directed in the former Chapter. If you are Maſter of your Buſineſs, and know exactly when to digeſt, when to deterge, when to incarn, and when to cicatrize, very great Performances may be done, with only Baſilicon, Precipitate, and dry Lint, without any other Applications whatſoever; but the whole Art lies in timing things, which you muſt learn by Obſervation.

CHAP. XII.

Of Compound, but Mild Ulcers, *in general.*

Q. *YOU have already told me that a compound* Ulcer *has a Diſeaſe, or a Cauſe, or Symptom annexed to it; pray tell me now, what you mean by theſe?*

A. Many Diſeaſes in Man's Body keep *Ulcers* from healing; ſome corrupt the Humours, as the *Leproſy* and *French-Pox*; ſome hinder laudable Blood to be ſent in ſufficient Quantity, as the *Phthiſis* and *Hectick Fever*; and ſome ſend too much wateriſh Humours with the Blood, as the *Dropſy*, &c. All which hinder the Union of the ulcerated Part.

Q. *Pro-*

Q. *Proceed.*

A. If the Humour offend in Quantity, it is to be abated by *Phlebotomy*, *Cathartick*s, and ſlender Diet; if it offend both in Quantity and Quality, we are to uſe both purging and altering Medicines. So far of its Proceſs, accompanied with a Diſeaſe; we next come to diſcourſe of it, as it has a Cauſe annexed to it, and that is the Diſtemperature of the Part.

Q. *What is that?*

A. The ſingle Diſtemperatures are in number four; (*viz.*) *too dry*, *too moiſt*, *too hot*, *and too cold.*

Q. *How do you know the dry Diſtemperature?*

A. The Colour of the *Ulcer* is ill to look to, if you touch it, it ſeems hard and dry, and little or no Matter flows from it.

Q. *How is it to be removed?*

A. If the Body be *plethorick* or *cacochymick*, in the firſt place bleed and purge; then *foment* with warm Water, and apply Water and Oil mixed, a Cloth or Pledget being wet in it, and laid over the *Ulcer.*

Q. *How long will you uſe this Method?*

A. Till the Part is a little tumified, ſoft and moiſt, and of a ruddy Colour.

Q. *How do you know a moiſt Diſtemperature?*

A. The Fleſh will be apt to be moiſt, a *Fungus* will be apt to grow, and plenty of Excrements will flow from the *Ulcer.*

Q. *How is it to be removed?*

A. Strong *Sarcoticks*, or *Deſiccatives* mixed with Digeſtives or Incarnatives are to be uſed; (*viz.*) *Plumb. uſt. Lap. Calaminar. Rad. Irid. Gum Oliban. Maſtich, Æs uſtum*, &c.

Q. *How is a hot Diſtemperature known?*

A. The

A. The ulcerated Part will be ſomewhat tumified, hard and red, and the Party's Complaint, and your own Touch, will inform you.

Q. *How is this to be removed?*

A. Diſſolve ʒij. *of Alum Roch.* in *Aq. Plantag.* ℔j. or diſſolve *Vit. Alb.* or *Vit. Rom.* in *Aq. Plantag.* or *Aq. Sperm. Ranar.* &c.

Q. *How do you know a cold Diſtemperature?*

A. By its Colour, Hardneſs, Senſe of the Patient, and your own Feeling.

Q. *How is this to be remedied?*

A. (1.) Foment the Part with a Fomentation made *ex Cereviſ. Fort.* wherein has been boiled *Calamint. Centaur. Abſynth. Chamæmel. Tanaſet. Scord. Ruta,* &c. Then dreſs the *Ulcer* with a Digeſtive and an Emplaiſter *ex Paracelſ. Diach. cum Gum de Mucilaginib.* &c. over all.

Q. *What do you mean by a Symptom annexed to an* Ulcer?

A. Chiefly *Pain*; which by Attraction brings Humidity to the Part, and ſo obſtructs the Cure; it alſo inflames the Part, cauſeth Watching, Fainting, and ſometimes Convulſions.

Q. *How is Pain to be removed?*

A. Two ways: (1.) By taking away its Cauſe, which is Affluxion of Humours. (2.) By Application of Anodyne Medicines; both which have been ſpoken to, in the Doctrine of Tumors, *Page* 2, 6, *&c.* Out of which frame Cataplaſms or other Dreſſings at your Diſcretion.

CHAP. XIII.

Of a Sinuous Ulcer, *without any Callosity.*

Q. *What is a Sinuous* Ulcer?

A. Surgeons call that *Ulcus Sinuosum* which is hollow like a *Coney-burrow*; they are sometimes *superficial*, sometimes *deep*, sometimes *strait*, and sometimes *oblique*, &c. Some of which have neither Hardness nor *Callosity*, which we term *Ulcera Cavernosa*; and some have both Hardness and *Callosity*, and these are called *Fistulæ*.

Q. *How is* Ulcera Cavernosa, *without* Callosity, *cured?*

A. (1.) By Injection of fit Medicines without opening. (2.) By opening, and dressing it artificially.

Q. *Suppose you was to do it without opening, how would you proceed?*

A. First the Cavity is to be fill'd with Flesh, and the disjoined Parts are to be agglutinated.

Q. *Of what Nature ought the Applications to be?*

A. The *Incarnatives* must dry without *Erosion*, and the *Glutinatives* must have both *Astriction* and *Dryness*.

Q. *What Medicines are they?*

A. An Injection of *Aq. Hord. Mel. Rosar. Myrrh. Sarcocol. Bacc. Myrt. Sumach. Rad. Tormentil. Spir. Vin.* &c. fitted in due Proportions, and strongly boiled, and injected warm.

Q. *How will you know when 'tis sufficiently mundified?*

A. When I find the *Quittor* neither stinking, reddish, pale, black, nor waterish.

Q. *Well;*

Q. *Well; but if it be not enough mundified, how will you proceed?*

A. Then I will form Injections *ex Centaur. Absynth. Marub. Alb. Card. Ben.* &c. decocted in Wine, with an Addition of *Mel. Ægyptiac. & Mel. Rosar.* &c.

Q. *How is it to be dressed artificially?*

A. (1.) Lay upon it (the whole length of the Cavity) *Empl. ad Herniam,* folded four or six times double when spread, to press the Parts together when rolled, in order to Union, and then inject your Medicine; then put in a short leaden Pipe, having the Brims turned back, to keep it from slipping in; then shut up the Orifice and the Tent with a Bit of the aforesaid Emplaister, snipp'd in the middle, to let out the *Quittor*; above that, place a Piece of Spunge, moistened with the Medicine with which you dress the Ulcer; and over that place a Pledget of Tow. On the Cavity of the Ulcer lay a thick Bolster; and over all, a soft Linen-Cloth double; then begin your Rolling at the Bottom, where it must be something strait, (but not so as to cause Pain) to press out the *Quittor,* and cause *Agglutination.*

Q. *How often is it to be dressed?*

A. If much Matter does not flow, dress it every third Day.

Q. *How will you know if it is about to agglutinate?*

A. If I find the Matter abate, is laudable in Colour and Consistence, and have no ill Smell, and if the Cavity be without Pain and Tumor.

Q. *But why must it be dress'd so seldom?*

A. Because often dressing gives way to cold Air, which hinders Union.

Q. *But what must be done if the* Cavity *be lower than the* Orifice *?*

A. Way must be made for the *Quittor* two Ways: (1.) Either by opening the lower end of the *Sinus* only: Or, (2.) By laying open the whole Cavity; for if one of these be not done, no Cure can be expected.

Q. *In what Cavities will you lay open the lower-end [only]?*

A. (1.) If the *Sinus* be of an extravagant Bigness. (2.) Or if it be in a great Joint: Or, if there be Nerves, Tendons, great Veins, or Arteries in the way, the Reasons of which are evident.

Q. *How are these ways to be performed?*

A. By Caustick, or Incision.

Q. *In what Cases is a Caustick most proper?*

A. (1.) If the Patient be timorous. (2.) If he be sick and weak. (3.) If it be in a Part that may cause Deformity. (4.) If there is fear of a Flux of Blood.

Q. *What do you observe in applying your* Causticks?

A. If the Situation of the Part or Member wherein the *Sinus* is, be in the upper side, then *Lapis Infernalis* is best; but if on the lower side, then the *common Caustick* is best.

Q. *How will you open it by Incision?*

A. Either with an Incision-Knife and Directory, or with the Probe-Scissars, which is best; then fill it with Dorsels, to keep the Lips asunder, and arm them with Rectitives, as in other Cases.

Q. *But what if you find, that notwithstanding all this, the* Ulcer *does not heal as you expect?*

A. Then I must give Drinks made of *Sarsaparilla, Guaiacum, China, Agrimon. Hyperic. Virg. Aurea, Sigil. Solomon. Rad. Symphit. Torment. Bistort. Marub.* &c. Which the Patient must drink of, for three Weeks or a Month, and keep to a spare

ſpare Diet, and ſuch as is of eaſy Digeſtion: Or let the Patient take ℥j. of *Tinctura Gum Guaiaci*, in Syrup of Damask Roſe-Water, and then mixed with a Glaſs of Wine in the Morning faſting, half an Hour before Dinner, and laſt at Night, going to Bed. The Preſcription is this; ℞ *Spirit. Vin. Rect.* ℔ij. *Pulv. Gum Guaiaci* ℥iv. *Diſſolv. in Balneo, till the Tincture becomes reddiſh*, &c.

CHAP. XIV.

Of the palliative Cure of Sinuous Ulcers *or* Fiſtulas *with Calloſity in general.*

Q. *What is a* Fiſtula?

A. It is a *Sinuous Ulcer*, narrow, and long, with *Calloſity*, and *virulent ſtinking Matter*, with little Pain.

Q. *How will you know to what Part the* Fiſtula *paſſeth?*

A. If it paſſeth to the fleſhy Parts, the Matter appears white, ſmooth and plentiful, and the Part where your Probe ſtops, ſeems ſoft. If it paſs to a Nerve, a fat and oily Matter comes forth; the Motion which is cauſed by that Nerve is impaired, and the *Fiſtula* is more than ordinary painful, and the Bottom being touched by your Probe, cauſeth a Pain and Numbneſs. If it paſs to the Veins and Arteries, yet ſo as their Coats be not *eroded*, then the Matter looks like Lees of red Wine; if it has *corroded* a Vein, Blood iſſues out thick, of a dark Colour, without Impetuoſity; but if an Artery be wounded, the Blood is more red, bright, and comes forth with leaping and Violence, (or *per Saltum*, as Surgeons call it;) if it

t has paſſed to the Bone, and that be corrupt, the Matter is yellow, of an ill Scent, and the Bone is to be felt rough, uneven, *&c.*

Q. *What Preſages can you make concerning the Cure of* Fiſtula's?

A. No *Fiſtula* is of eaſy Cure: (1.) Becauſe of the Unfitneſs of the Part to receive proper Medicines. (2.) By reaſon of the Quality of the Medicines, which muſt be ſharp and biting, and ſo cauſe Pain; from whence often come Fevers and Faintings, *&c.* (3.) Thoſe which are ſuperficial are more eaſy of Cure than thoſe which are deep. (4.) Thoſe with many *Sinuoſities*, require Inciſion. (5.) In thoſe ending on Veins and Arteries, you are to encounter with *Hemorrhages.* (6.) In thoſe on the Nerves and Tendons, with *Pain* and *Numbneſs.* (7.) Where the End is more depending than the Orifice, it is hard of Cure. (8.) In *Fiſtula's* of the Back, if the *Spine* be carious, ſhun the Cure. *(9.) Fiſtula's* in the Joints are dangerous. (10.) *Fiſtula's* of a long ſtanding, in a depending remote Part, by which Nature hath been uſed to diſcharge her ſelf of Superfluities, if they are not painful, may rather be kept open than cured; for they hinder Diſeaſes, and keep the Body in Health.

Q. *What do you call a* palliative Cure?

A. It is when a *Sinuoſity* is inwardly dried for a time, and the Orifice ſeems ſhut up by a thin Skin, until new Moiſture opens the Orifice again: Or, it is a Method whereby it is not ſuffered to grow worſe, but by Art is made more eaſy, and the Life of the Patient is more comfortable than otherwiſe it would be.

Q. *How is this done?*

A. (1.) By a convenient Diet, feeding on ſuch Meats as are of an eaſy Digeſtion and afford good

Juice, the Body is to be purged by gentle Means, either by Diet-Drinks or purging Ale, made of *Sarſa. Rad. Symphit. Polypod. Tormentil. Hermodact. Fol. Sen. Rad. Liquor. Sem. Aniſi, Guaiacum, Sanicul. Alchimil.* &c. and drink of it three times a Day. (2.) By local Applications. Injections of *Aq. Calcis, Syr. Roſ. ficc. Syr. Myrtillor. Litharg. Auri*, &c. Or, *ex Aq. Plantag. Vit. Rom.* &c. injected warm. Lay to the Orifice a Pledget of Lint wet in the ſame, *and above that a Diapalma Plaiſter*, &c. and dreſs it only every other Day.

CHAP. XV.

Of the true Cure of Fiſtula's *in general.*

Q. BY *what Means will you obtain the Cure of a* Fiſtula?

A. By Diet, Medicine, and manual Operation.

Q. *What Diet do you adviſe?*

A. The ſame as in the Cure of an Ulcer, but it ought to be taken very ſparingly, and ſuch as is of eaſy Digeſtion.

Q. *What is your* pharmaceutical, *or medicinal Method?*

A. If a *Cacochymia* or *Plethora* have ſeized the Patient, let him take for ſome time ſome *purging Ale*, compoſed of *Sarſaparilla, Guaiacum, Rad. Biſtort. Symphit. Tormentil. Polypod. Fol. Alchimil. Sanicu. Fol. Sen. Sem. Aniſi, Fœnicul. Rad. Glycyrrh.* &c. Alſo you may give *Elect. Cariocoſtin. è Succo Roſar.* &c. After the uſe of theſe, you may give a *conſolidative Drink* made of *Rad. Oſmond. Regal. Centaur. Min. Agrimon. Vinca Pervinca, Virga Aurea, Symphit. Plantag. Equiſet.* &c. which is to be drank of,

of, three or four times a day, a Pint at a time, which may be ſweeten'd with Sugar, if the Patient will.

Q. *What is your Chirurgical Method?*

A. (1.) The *Fiſtula* is to be *dilated.* (2.) The *Callus* is to be *removed.* (3.) The *Part* is to be *mundified.* (4.) *Union* or *Conſolidation* is to be *procured.* (5.) And then it is to be *cicatrized.*

Q. *How is it to be dilated?*

A. Three ſeveral Ways: As, (1.) By Inciſion. (2.) By Tents of Sponge, or *Rad. Gentian.* or Pith of Elder. And (3.) By the *Fiſtula Tent.*

Q. *In what Caſes will you make Inciſion?*

A. If the *Fiſtula* is not deep, and in ſtrong Bodies; but if it has many *Sinuoſities*, or a *Calloſity*, the one is to be dilated, and the other removed, before Inciſion be made.

Q. *How do you prepare your* Sponge Tents?

A. Melt a ſufficient Quantity of *Melilot Plaiſter*, and, whilſt it is hot, put a Sponge into it, to ſuck it up; then take it and put it into a Preſs, and ſqueeze it hard, where let it remain till cold; then cut it out into Tents of what form you pleaſe.

Q. *How is the* Fiſtula Tent *prepar'd?*

A. Take all the *Down* (without any of the Threads) of *fine Lint*, with which mix ſome of the White of an Egg beaten, and make Tents of what length your *Fiſtula* requires; make them upon a ſmooth *Deal Board*, and dry them, which will be ſtiff and pierce like a Probe, and which may be armed with fit Medicines, *&c.*

Q. *How muſt the* Calloſity *be removed?*

A. Either by *Medicines* or the *actual Cautery.*

Q. *What are the Medicines?*

A. (1.) Mild. (2.) More harſh. (3.) Such as are cauſtick. The firſt Sort are of an emollient, digeſtive Quality, and to be uſed if the

Callus be but ſmall, in a fleſhy Part, and a young Patient: As, *Unguent. Dialtheæ*, or *Nicotianæ* mixed with *Turbith. Mineral.* or *Præcipit. Rub.* &c. Of the ſecond ſort, are *Unguent. Apoſtolor. cum Turb. Min. vel Præcipit. Rub. Alum. uſt.* &c. Of the third ſort, (*viz.*) *Cauſticks*, ſome are more gentle, as *Auripigment. Calc. Viv. Sulph. Viv.* &c. Of the ſecond ſort, are *Virid. Æris, Vitr. Calcinat. Alum. uſt. Turb. Min. Vitriol. Vomitiv.* &c. mixed in fit Proportions, which are thus to be uſed: If the *Fiſtula* is dilated by Inciſion, ſprinkle the *Callus* with ſome of theſe Powders: Or, if you uſe Tents, mix theſe Powders with ſome *Populeon*, and arm your Tents with it. But where there is great *Calloſity*, and the *Sinus* ſmall, and its Mouth fungous, I uſe the following Troches; ℞ *Mic. Panis* ℥ij. *vel q. ſ. pulv. ſubtiliſſ. Merc. Sublimat.* ℈ſs. *pulv. Plumb. Rub. & Rad. Gentianæ ana* ℥ij. *miſce.* Of theſe (being well incorporated) make Troches and Tents of divers Forms, and dry them; and either put one into the *Fiſtula*, or upon its Mouth, or (if ſuperficial) its whole Length, and in twelve Hours or leſs, (according as it is deep, or ſuperficial) it will do its Work effectually and ſafely, and with but little Pain: But take care it be not apply'd to Nerves or Arteries, for fear of Miſchief.

Q. *Very well; but what is to be done afterwards?*

A. You muſt, twice a day, apply to the Part an *Anodyne Cataplaſm*, and you muſt let the Tent remain in the *Fiſtula*, till it falls out of itſelf, (unleſs you have Reaſons to the contrary) becauſe they will (by ſo doing) bring the *Callus* out with them: And as to the *actual Cautery*, it is to be uſed as ſeldom as poſſible, and with great Caution, as the able Surgeon ſees fit.

Q. *How will you mundify?*

A. By

A. By *Unguent. Ægyptiac.* mixed with Brandy or Wine, and injected warm once a day.

Q. *How will you conſolidate, or unite the Parts?*

A. Decoct. *Rad. Ariſt. Rot. Torment. Biſtort. Symphit. Centaur. Min. Virg. Aurea, Sigil. Solomon. Plantag.* &c. very ſtrongly; then, whilſt warm, add to every Pint *Mel. Angl.* ℥iv. boil it again; ſtrain and clarify it, which inject into the *Fiſtula* warm; and dreſs it as directed in the Cure of a Sinuous Ulcer.

Q. *How is it to be* cicatriz'd?

A. That calls for no new Directions.

Q. *How ſhall I know when it is near cured?*

A. you may judge it to be ſo, when the Humour is thick, little, white, even, and the Place void of Pain and Tumor.

CHAP. XVI.

Of a Fiſtula Lachrymalis.

Q. *What is a* Fiſtula Lacrhymalis?

A. A Tumor called *Anchilops*, ariſing between the great Corner of the Eye and the Noſe; if it apoſtemates, 'tis called *Ægilops*; which, being neglected, degenerates into a *Fiſtula*, even quite to the Bone, which is called *Fiſtula Lachrymalis.*

Q. *What are the Signs of it?*

A. (1.) It is known by its Orifice. (2.) By preſſing with the Finger, the Matter iſſues out. (3.) By paſſing a ſmall Probe to the end of its *Sinus.*

Q. *What are the Prognoſticks?*

A. (1) All theſe *Fiſtula's* are of hard Cure. (2.) If the *Quitor* has made its way into the inner Paſſage of the Noſe, it is not to be cured. (3.) If it *turns cancerous*, we are only to uſe a *palliative Cure.* (4.) If it continues long, it cauſes a Conſumption of the Eye, or Blindneſs.

Q. *Why are they of hard Cure?*

A. (1.) By reaſon of the Humidity of the Part. (2.) By reaſon of its continual Motion. And, laſtly, by reaſon of the Tenderneſs of the Place.

Q. *By what Signs do you know it to be* cancerous?

A. By its livid, hard Brims, exquiſite Pain, and *fœtid virulent Matter.*

Q. *How will you cure a* Fiſtula Lachrymalis *not cancerous?*

A. (1.) Dilate it with the *Fiſtula* Tent, and then enlarge it with the Sponge Tent. (2.) You are to remove the *Calloſity* with *Merc. Præcipit. Rub. Turb. Min. lot. Unguent. Popul.* &c. as before directed. (3.) You muſt mundify with *Mel. Roſar. in Aq. Rutæ* warm, once a day. (4.) Conſolidate with *Aq. Plantag. cum Syr. è Roſ. ficc.* And, (5.) cicatrize with *Empl. de Minio, Diapalma, cum Succis,* &c.

Q. *How will you do if the Bone be foul?*

A. This is rectified two ways: (1.) By actual Cautery. (2.) By Inciſion.

Q. *As how?*

A. The actual Cautery *carries Horror with it*; yet moſt Authors like it as the beſt way. It muſt be made in the Form of an Olive-Stone, and the Parts are to be defended from the Fire with a hollow Plate, or elſe paſs it thro' a *Canula*; and afterwards apply to it Pledgets dipped in *Vin. Rub.* and over all *Diapalma*, &c. till the Bone ſcales; then manage it as has been before directed.

Q. *How is the Inciſion to be made?*

A. Having

A. Having with a Probe found out the Cavity, both upwards and downwards, draw a Line with Ink, between the *Glands* of the Eye and the *Trochlea*, thro' which the *ſmall Tendon* of the *Muſculus ſuperior* (*vel major*) paſſeth, and ends obliquely in the ſuperior Part of the *Cornea*; then make Inciſion to the Bone, and dilate the Inciſion with your Nails; then thruſt in a ſmall *Troch* made of *Turb. Min. Ter. Sigil. & Populeon*, and about it lay a Pledget of *Populeon*, and over that *Empl. Diapalm.* and with fit Boulſtering and Bandage roll it up, firſt filling the *Orbit* of the Eye with ſoft Linen Boulſters dipped in *Aq. Sperm. Ranar.*

Q. *How long is this Method to be uſed?*

A. Morning and Evening, until the *Troch* with the *Callus* fall out of its own accord, and then upon the Bone, ſo far as it is carious, I apply *Pulv. Euphorb.* then fill up the Cavity with a Piece of Sponge prepared with *Melilot*; over that a Pledget of *Unguent. Popul.* and an Emplaiſter, and roll it up as before directed.

Q. *How long are theſe Dreſſings to be uſed?*

A. Until the Bone ſcales, which is about twenty Days after; then *mundify*, *conſolidate*, and *cicatrize*, as before directed.

Q. *But ſuppoſe that the whole Subſtance of the Bone of the Noſe joining to the* Fiſtula *be foul, and ſo* (*after the* Fiſtula *be healed*) *it breaks out again?*

A. Then enlarge the *Sinuoſity* till the corrupt Bone appears; then pierce the Bone of the Noſe with *ſome fit Inſtrument*, that the *Quittor* may diſcharge thro' the Noſtrils, and proceed to heal, as is directed in the *palliative Cure.*

Q. *But if it prove* cancerous, *how will you proceed?*

A. The beſt Medicine in this Caſe, is quoted by Dr. *Read* (the Surgeon, not the Quack) from *Heurnius*, and is this: ℞ *Calaminar. Ter. uſt. atque*

in Acet. Vini extinct. ℈j. *Myrrh. Plumb. uſt. & lot. ana* ℈ſs. *Croci gr.* v. *Opii gr.* ij. *Æris uſt.* ℈iv. *Decoct. Fœnugrec.* ℥j. *miſce.* Or inſtead of *Decoct. Fœnugrec.* mix it with freſh *Axung. Porcin. in Aq. Roſ. lot.* &c.

CHAP. XVII.

Of a Fiſtula *in the Breaſt.*

Q. HOW *does a* Fiſtula Thoracis *happen?*

A. By a penetrating Wound of the Breaſt, or from a *Phlegmon* poſſeſſing the *Pleura* and *intercoſtal Muſcles.*

Q. *What are the Signs of a* Fiſtula Thoracis?

A. They are *obvious* to every Eye; it is therefore needleſs to give any.

Q. *What are then the Differences of theſe* Fiſtulas?

A. Thoſe which follow a Wound have but one Orifice, and that according to the Penetration of the Wound; but that which enſues an Impoſthume, has commonly more Orifices than one, ſome of which paſs *directly*, and ſome *curved.*

Q. *Give the Prognoſticks?*

A. All *Fiſtula's* of the Breaſt are of difficult *Cure.*

Q. *Why ſo?*

A. (1.) Becauſe the Breaſt is in continual Motion. (2.) In theſe *Fiſtula's* the *Pleura* is commonly ulcerate, which hardly admits of Cure. (3.) It often corrupts a Rib. (4.) The end of it is commonly lower than its Orifice, which prevents Expulſion of *Quittor.* (5.) Great Caution is to be uſed in the Application of Medicines, in this Caſe more than in other Parts. (6.) Becauſe *Fiſtula's* here waſte the Body, and produce *Hectick Fevers*: which

which if once formed, are ſcarce ever curable, join'd with a *Fiſtula* of the Breaſt.

Q. *How is it to be cured, if curable?*

A. By a convenient Diet, pectoral Decoctions, and fit Applications.

Q. *What is to be preſcribed?*

A. Such as is ordered in the general Cure of *Ulcers?*

Q. *Of what are your pectoral Decoctions compounded?*

A. Ex Flor. & Fol. Tuſſilag. Capil. Veneris, Marub. Alb. Symphit. Tormentil. Biſtort. Flor. Violar. & Borag. Rad. Enulæ, Fol. Hyſop. Flor. & Rad. Malvar. Rad. Petroſelin. Fœnicul. Liquorit. Scabious, Valerian, Sarſaparilla, China, Guaiacum, Uvar. Paſſ. Fic. pinguid. &c. Of theſe, Drinks are to be made, and drank in large *Quantities*, at leaſt two Quarts in a Day. But that you may have a certain Preſcription to depend upon, take this following, which has done Wonders in this Caſe, and will effect a Cure, if the Patient is curable, (*viz.*) ℞ *Rad. Liquorit.* ℥iiij. *Raſ. C. C.* ℥ij. *Raſ. Eboris* ℥j. *Sant. Citri* ℥ij. *Lign. Saſſafr. & Sarſaparilla, ana* ℥ij. *Capil. Veneris, Ling. Cervin. Heder. Terreſtr. Tuſſilag. Agrimon. ana* Miij. *Coq. omn. in Cong.* vj. *Aq. Font. ad Cong.* iv. *cum Uv. Paſſ. Exacinat.* ℔j. *Mel. Anglican.* ℔viij. Boil, ſtrain, and ferment with Yeſt, (like Ale) and when it is almoſt fermented enough, hang in it (in a Bag) *Nuc. Moſc. contuſ.* N° iij. *Fol. Roriſmar. ſicc.* Mj. Keep it a Week, and then drink it for common Drink, for four or ſix Weeks. If a *Fever* attends, uſe the *Cortex* alſo; and if it be very high, make the Drink with half Honey, and half Sugar.

Q. *You ſay, that one Reaſon why a* Fiſtula of the Breaſt *is of difficult Cure, is, becauſe the Ending of the*

the Fiſtula *is lower than the external Orifice; pray tell me how this is to be remedied?*

A. By Inciſion; in which two things are to be conſidered; firſt, the Place; and, ſecondly, the Care to be uſed in the Operation.

Q. *What Place is beſt?*

A. The left ſide rather than the right, for fear of wounding the Liver, or the *Diaphragma*, which it beareth up; and as for the particular Part, let it be about the beginning of the next Rib, above which the Orifice of the *Fiſtula* ſhews itſelf.

Q. *How is it done?*

A. Divide the Skin towards the upper Part of the lower Rib, then make way throughout the *intercoſtal Muſcles*, and dry all with a Sponge, and put in a Sponge Tent; and if you paſs no further than the Diviſion of the *Pleura*, you are ſafe.

Q. *But what are the Signs of an* Hectick Fever?

A. If it be confirmed, the Eyes grow hollow, the Colour of the Skin decays, the Skin of the Forehead ſeems dry and ſtretched out, the Eyelids are heavy, the Cavity of the Breaſt ſeems as hollow as if it was without *Viſcera*, and the Body is a mere Skeleton: Theſe are true Signs of a *Hectick Fever*, or a *dry Maraſmus*.

Q. *But if ſuch a one comes to you, and implores your Help, and you tell him his Danger, and that you believe him paſt Recovery, yet he ſtill deſires you to do what you can, what is the Method you would uſe,* to make his Life eaſy?

A. I would inject into the *Fiſtula*, *Aq. Plantag.* in which *Fol. Roſ. Rub.* have been boiled, and cover my Tent with *Diapalma*; I would order him Broths of *Mutton*, *Veal*, *Chicken*, &c. wherein had been boiled *French-Barley*, *Mallows*, *Raiſins*,

Marigold-Flowers, Cowſlip-Flowers, Coltsfoot-Flowers, &c. Alſo give him *Jellies, Almond-Milk, Goats-Milk,* or *Aſſes-Milk, Calves Feet ſtewed, poached Eggs, and freſh ſweet Butter*; and if by this Method he gathers any Strength, be not out of hope, and encourage the Patient.

Q. *But what are your local Medicines in* Fiſtula's *here without a* Hectick Fever?

A. The Method here differs but little from the general Method: *Dilate* with the *Fiſtula* Tent and Sponge; but in removing the *Callus*, take care that the *Trochisk* do not reach to the Cavity of the Breaſt, but rather apply a Tent arm'd with *Populeon*, wherein ſome *Fiſtula-Powder has been mingled*; and when the *Callus* is removed, mundify with *Aq. Calcis*, and *Mel. Roſar.* (but take heed of injecting any *bitter* Medicine.) This being done, proceed, and conſolidate with an Injection of *Aq. Plantag. & Syr. è Roſ. ſicc.* Then wet a Pledget in this *Syrup*, and lay over the Orifice, and an Emplaiſter *ex Paracelſ.* over all, *&c.*

CHAP. XVIII.

Of a Fiſtula *in the Belly.*

Q. *WHat Parts do you include, when you ſpeak of a* Fiſtula *in the Belly?*

A. I underſtand and include the *inguinal Parts*, and *in Ano.*

Q. *From whence do* Fiſtula's *in the Groin proceed?*

A. Either from *Venereal Buboes*, neglected or ill-cured, or from a *Plethora* and *Cacochymia*, the Matter not coming to the *Emunctories* themſelves, which receive the Excrements of the Liver, but hinder'd

hinder'd either thro' Weakneſs of the *expulſive Faculty*, or by the croſſing of the *Muſcles.*

Q. *What Preſages can you make in this Caſe?*

A. Fiſtula's in theſe Places, which paſs to the Cavity of the *Abdomen*, are very hardly cured; and if the Guts are eroded, and the Excrements come forth, 'tis great odds, but Death puts an end to the Controverſy; tho' ſuch things have by chance been cured, and therefore Men are not to be left to periſh without Help.

And if there is any Belief in Man, by the Diet-Drink in the foregoing Chapter, Mr. *Paine*, a very ſenſible ingenious Surgeon, and an honeſt ſober Man, now living at *Layſtoff* in *Suffolk*, (from whom I firſt had the Preſcription) told me, That a Woman, who by reaſon of a *Tumor* on the *Abdomen*, had a Mortification of the Inteſtines, with loſs of Subſtance there, whereby the Excrements came continually out; and altho' all hopes of Life were gone, was perfectly cured, (as it were miraculouſly) by the internal Uſe *(alone)* of that Drink, with fit external Applications; And, *what has been, may be*; therefore never deſpair, ſo long as there is Life; and ſuch a Cure will never want Applauſe, nor fail of Reputation as well as Reward.

Q. *How are theſe* Fiſtula's *to be cured?*

A. If they run along ſuperficially, the beſt way is to lay them open, and then the *Fiſtula* Powder to be applied, and follow the Method already laid down, in order to finiſh the Cure.

Q. *Tho' you can promiſe no Cure, if the* Spine *be foul, yet ſomething muſt be done, as long as there is Life; pray how will you dreſs ſuch a Patient?*

A. Only uſe ſuch an Injection as this of *Aq. Plantag. Syr. Roſ. ficc. Tinct. Myrrhæ*, &c. with a Plaiſter *ex Paracelſ.* &c. over all.

Q. *But*

Q. *But ſuppoſe the Guts are perforated, and the Excrements come forth?*

A. Let the Patient's Diet be Sheeps and Calves-Heads and Feet ſtewed; alſo Rice boiled in Milk, wherein Steel has been often quenched; alſo a Glaſs of red Wine with a Toaſt, and uſe the Diet-Drink aforeſaid, and keep the Orifice open with a Sponge Tent, till the Gut be healed. Diſſolve a little *Alum. Roch. in Vin. Rubr.* and add *Syr. Myrtillor.* and make an Injection; and for the reſt of the Cure, do as has been directed.

Q. *From whence proceeds a* Fiſtula in Ano?

A. Moſt commonly from a *Phlegmon* there, broke, and ill-cured.

Q. *What are the Differences of* Fiſtulæ in Ano?

A. Some penetrate the *Inteſtinum Rectum*, and ſome do not; and both theſe again, are either ſuperficial or deep.

Q. *How will you know whether it has pierced the* Inteſtinum Rectum, *or not?*

A. By theſe Signs: (1.) If upon breaking Wind part of it makes way thro' the *Sinus.* (2.) If the Excrements appear mingled with the *Quittor.* (3.) If an Injection paſſes quite through. (4.) By the Finger and Probe.

Q. *What Prognoſticks have you in this?*

A. No *Fiſtula in Ano* is eaſy of Cure.

Q. *Why?*

A. Becauſe this Part is the *Sink* of the whole Body, and affords great Quantity of *Filth* and ſuperfluous Humidity, which hinders the Cure.

Q. *How will you proceed in the Cure?*

A. It is to be effected, (1.) By convenient Diet. (2.) By inward Medicines. (3.) By Inciſion or Deligation: And (4.) By proper Medicines.

Q. *What Diet and internal Medicines are beſt?*

A. That which I have already directed.

Q. *When*

Q. *When is Inciſion or Deligation to be attempted?*

A. When the *Fiſtula* is ſuperficial, and not elſe.

Q. *How is Inciſion to be made?*

A. If the *Fiſtula* does not paſs to the *Inteſtinum Rectum*, after you have enlarged it and removed the *Calloſity*, lay it open by a Snip of your Probe-Sciſſors, and by Dorſels keep the Lips aſunder; then digeſt, mundify, incarn, *&c.* as has been directed; and be ſure to take care, that ſound good Fleſh be generated in the Bottom, before you endeavour to unite the Brims.

Q. *But ſuppoſe it to go deep inwardly, and you cannot come to make* Inciſion?

A. Then dilate the *Fiſtula* with the *Fiſtula* or Sponge-Tent, and remove the *Callus* with the *Trochisk* aforeſaid; which being come out, and the *Callus* quite gone, cleanſe with *Mel. Roſ. & Aq. Calcis*; then conſolidate and cicatrize, as has been taught; and remember daily to ſhorten your Tents, till the *Sinus* is quite fill'd up, which you ſhall know by the Goodneſs and ſmall Quantity of the Matter it yields. But if the *Fiſtula* reach into the *Inteſtinum Rectum*, then cutting aſunder the whole Length of the *Sinus* by Deligation, is the beſt way to cure it.

Q. *How is that performed?*

A. Firſt dilate the *Sinus*, and remove the *Callus*, as has been taught, and then take a ſtrong Thread of *Silk*, or *Hemp unwhitened*, and put one End of it into the Eye of a ſmall Probe or Needle, of Lead, or Silver, or other thing that will bend; then put the Eye with the Thread thro' the *Sinus* to the *Inteſtinum Rectum*; then put your Fore-Finger into the *Anus*, and pull the Thread and Probe out of the *Anus*; then make good Deligation, tying the Ends of the Silk with a running Knot, that it may be the more eaſily looſen'd; and ſo more and more

draw

draw in the Ends of the Thread at every dreſſing, if it may be permitted: And when the *Sinus*, by this way, is wholly divided, proceed in the Cure as has been taught; but remember to put under the Knot a ſmall Boulſter of Linen; which will be for the great Eaſe of the Patient; and without it the Ligature will not be tolerable.

CHAP. XIX.

Of an Herpes Exedens.

Q. *What is an* Herpes?

A. It hath its Name *à Serpendo*, from its creeping Quality. There are three Species of it: (1.) A *Simple Herpes*, which is a Puſtule of a yellowiſh inflamed Colour, with a ſharp Head; in the Face they appear ſingle, and in other Parts *ſometimes*, and are generally called Cholerick Puſtules. When they overſpread the Back, Sides, or Breaſt, they are accompanied with an *Eryſipelas*, and are then called *Shingles*. (2.) *Herpes Miliaris*; this ariſeth in a Cluſter of ſmall Wheals, not much differing from the Colour of the Skin: they itch; and being ſcratched, they weep a thin Water, which drying, a Scab appears at the head of each Wheal, in the form of Millet-Seed, from whence it hath its Name. (3.) *Herpes Exedens*; this riſeth in the Skin, in a ſmall Tubercle, on the Top of which appears an *Ulcer* like a *Pin-Hole*, which in time grows broad, uneven, and ſometimes livid, and will heal in the middle, whilſt the Brims continue ſore.

Q. *What is required in the Cure of an* Herpes Exedens?

A. (1.)

A. (1.) The Humour which flows to the Part is to be ſtay'd. (2.) The Humour already in the Part muſt be evacuated. (3.) Convenient Applications to cure the *Ulcer* it ſelf.

Q. *How is the firſt performed?*

A. By purging the Body well from *thick Choler* and *Bilis Atra*, (if the *Ulcer* is of a livid Colour) with *Elect. Lenitiv. Pulv. Sanct. Rhab. Sena, Polypod. Hermodact.* &c.

Q. *How is the ſecond performed?*

A. By mixing ℥j. *Præcipit. Rub.* waſhed in Roſe-Water with *Unguent. Popul.* or *Mundificativum Paracelſi* ℥j.

Q. *How long is this Medicine to be uſed?*

A. Till the *Ulcer* ſpread no more, and look red.

Q. *How is the third Intention performed, which is to cure the* Ulcer *it ſelf?*

A. Give inwardly a Decoction of *Sarſaparilla, China, Guaiacum*, &c. and if you perceive the Brims of the *Ulcer* to *erode*, further and further, touch them with *Ol. Vitrioli*, or *Ol. Sulph.* Then endeavour to fill up the Cavity by Medicines which ſtrongly dry (yet are not corroſive;) as *Ceruſſ. & Tutiæ Præparat. Cort. Pin. cum Unguent. Nicotian. & Liniment. Arcæi*, &c. Or ℞ *Unguent. Enulat. cum Mercur.* ℥j. *Flor. Sulphur.* 3j. *miſce*; which is commended by ſome: and then cicatrize with *Unguent. Deſicc. Rub.* &c. A Simple *Herpes* is cured much like an *Eryſipelas*, by Evacuation and Contemperation of Choler; an *Herpes Miliaris* is to be treated much like the Itch, with Catharticks and Alterants. As for local Medicines in a Simple *Herpes*, *Succ. Polygoni, Equiſet. Plantag. Litharg. Auri, Ceruſſ. Ol. Roſ. Unguent. Alb. Diapomphol. Nutrit. Popul.* &c. But an *Herpes Miliaris* requires more powerful *Exſiccants*, and even *Mercurials*; which may be ſeen at large in *Wiſeman*, in the Chapter of *Herpes*, &c.

CHAP.

CHAP. XX.

Of a Phagedæna *and a* Nome.

Q. *WHat is a* Phagedænic Ulcer?

A. It is a deep *Ulcer* with tumify'd Lips, corroding the adjacent Parts, produced of *a bilious Humour*, inclin'd to Melancholy, not so thick as that which is the Cause of *Cancers*, nor so thin as that which causes an *Erysipelas* or *Herpes*.

Q. *Why is it called* Phagedænic?

A. Φαγέδαινα is a Greek Name, derived from Φάγω, (in Latin *Edo*) to eat; so that a *Phagedænic Ulcer*, is *Ulcus Exedens*, or an Eating *Ulcer*.

Q. *What is a* Nome?

A. Νομὴ, or *Ulcus Depascens*; in English, is a feeding consuming *Ulcer*, without any *Tumor* in the Brims, but endued with Malignity and Putrefaction, and Corruption of the Part.

Q. *How are these* Ulcers *to be cured?*

A. Let the Diet be such as affords a good Juice, and is of easy Digestion, and make a reasonable Evacuation by *Cathartick*s; and keep them to a Diet-Drink of *Sarsa*, &c. join'd with some vulnerary Herbs. Dress the tumify'd Brims of the *Phagedænic Ulcer* with *Unguent. Alb.* and *Populeon.* mix'd; and the *Ulcer* itself with *Unguent. Nicotian.* ℥j. *Mercur. Præcipitat. Rub.* ℥ij. *misce.* But as for a *Nome*, or *Ulcus Depascens*, it requires stronger Medicines than a *Phagedæna*; as *Vitr. Alb. Croc. Mart. Calc. Viv. Alum. ust. Plumb. ust. Æs ust.* &c.

Q. *How long are these Medicines to be used?*

A. Till the *Erosion* stops, and the *Ulcer* looks clean and red, then incarn and cicatrize, as has been taught.

CHAP. XXI.

Of a Cancer, *and a cancerous* Ulcer.

Q. *WHat is a* Cancerous Tumor?

A. It is a *Tumor* proceeding (as Authors say) of *Bilis Atra*, hard, unequal, of a leaden Colour, hot, painful, having full Veins appearing in the Parts adjoining, which imitate the Feet of a Crab, from whence it receives its Name.

Q. *What is the Cause of this* Ulcer?

A. A very hot Distemperature of the Liver, or Spleen, ill Diet, bad Wines, a hot Air, and sometimes a violent external Force, Grief, *&c.*

Q. *What Parts doth it mostly* invade?

A. Altho' it is possible for it to breed in all Parts of the Body, yet it generally seizes either the *Breasts* or *Matrix* of Women, and the Lips and Nose of the Face.

Q. *Why does it rather seize those Parts than others?*

A. The Breasts more readily receive this Humour, because of their loose and *glandulous* Substance; and a long Retention of the *Menstrua*, (whereby the Blood is, as it were, burned) is the reason of its seizing the Matrix.

Q. *What Prognosticks are to be made in this Case?*

A. (1.) No Cancer is of easy Cure. (2.) When it is come to a remarkable Bigness, it is to be extirpated. (3.) If the Patient be weak, and the *Tumor* very stubborn, (and more especially if it adhere to the Ribs,) tamper not with it, but content your self with *Lenients*; for if you use either *Knife* or *Cautery* to such, you hasten their End, and bring a Reproach upon yourself. (4.) Never be

be too large in your Promiſes of the Cure, where Extirpation cannot be made, eſpecially if it be ulcerate.

Q. *What is your Dietetick Method in the Cure?*

A. Let them forbear all ſtrong Wines, Cabbage, Cheeſe, and ſalt Fleſh or Fiſh; as alſo all things that thicken the Blood, and inflame the Humours; let their Diet be cooling and moiſtening; Violet-Leaves, Spinage, Purſlain, Sorrel boiled; alſo Mutton, Veal, Lamb, Pullets, poached Eggs, and Fiſhes that ſwim in clear Rivers; and let their Drink be a ſmall Ale, *&c.*

Q. *What is your* pharmaceutick *Means?*

A. Bleed in the Arm, if it be in the Breaſt; and in the *Saphena*, if it be in the Matrix; and let it be done at the *full Moon*: alſo give *Elect. Lenitiv.* in Whey, or *Rhab. Sen. Pulv. Sanctus*, &c. once a Week.

Q. *What is the* Chirurgical *or* Topical *Method?*

A. In a Cancer there is a *double Poiſon*, a *Putrefactive* and *Corroſive:* Now, if you uſe ſuch Medicines as ſuppurate other *Tumors*, you will bring Putrefaction; and, if you apply *Corroſives*, you aſſiſt the Poiſon, and increaſe the Malady.

Q. *What are then beſt?*

A. Thoſe which *repel and digeſt*; but ſhun all Emplaiſters, for they pen up the Humour by ſhutting the Pores: You may uſe *Succ. Nigel. Unguent. Popul. Farin. Lupinor. Secale, Succ. Symphit. Equiſet. Plantag. Millefol. Tapſus barbat.* &c. made into Cataplaſms. Alſo *Limac. & Succ. Heder. Terreſt.* is accounted a good Cataplaſm; but if the *Tumor* be very painful, apply *Rad. Cicut. Farin. Secal. & Ol. Myrtillor.* mixt into a Cataplaſm. Alſo, ℞ *Ol. Cydonior.* ℥iv. *Acet. Sambuc.* ℥j. and mix them well in a *leaden Mortar*; with either of which dreſs the *Tumor* twice a day: But ſome uſe only a *Plate*

of Lead, rubb'd over with *Argent. Viv.* and ſo apply it to the Part. And thus far of a *cancerous Tumor* not ulcerate.

Q. *What is a* Cancerous Ulcer?

A. It is known by theſe Signs, (*viz.*) thick Lips, a ſtinking Smell, the Lips are turned outward, greeniſh, and fretted, yielding a *Sanies* of a black or dark yellow Colour, and is extremely painful.

Q. *What differences are there found in theſe* Ulcers?

A. Two; (*viz.*) *Lupus*, and *Noli me tangere*; the former is in the Thigh or Leg, and the latter in the Face: but in any other part of the Body it carries its own proper Name of a *Cancer* only. There are ſome Cheats that go about, to gull charitable People out of their Money, by pretending to have a *Lupus*, or Wolf alive in their Breaſts, that they are forced daily to feed with raw Beef, *&c.* Beware of ſuch Impoſtors, and expoſe them, for ſuch a thing is altogether impoſſible, and unbecoming a Surgeon, ſo much as to name, unleſs by way of Contempt.

Q. *What Method muſt be uſed in the Cure?*

A. The ſame that was preſcribed in a *cancerous Tumor*, (as to Phlebotomy, Diet, and Purging.) To the *Ulcer* apply Cloths wet in *Succ. Solan. vel Nicotian. Angl.* or in *Aq. Sperm. Ranar.* in which is diſſolv'd *Sacc. Saturni*; eſpecially if the Cancer be not ulcerate. Alſo *Plumb. uſt. & lot. Tutiæ, Ol. Roſ. Ceræ, Succ. Solan.* &c. beat up in a leaden Mortar, to the Conſiſtence of an Unguent, and applied, *&c.*

Q. *Will theſe Medicines ſerve in all* cancerous Ulcers *without diſtinction?*

A. No; they only ſerve to allay the raging Pain *in large and deep Cancers*, and to put a ſtop to their Increaſe

Increaſe; but if it be only ſuperficial, it may be eat out with *ſublimed Arſenick*, as ſome Men have taught: But this is a very dangerous Attempt; and we never met with any ſuch Application that ſucceeded, and ſhall hardly ever make the Experiment.

Q. *But ſuppoſe this Grief happens in the* Matrix?

A. Then uſe this Medicament, ℞ *Stercor. Bubul.* ℔iv. *Herb. Rob. Plantag. Semperviv. Hyoſciam. Portulac. Lactuc. ana* Mj. *Canc. fluv.* N° xij. *Contund. omnia; & diſtil. in Alemb. Plumb. Imbuet. Camphora, & injiciatur frequent.*

Q. *How is a* Noli me tangere *cured?*

A. ℞ *Vitriol.* ℔iſs. *Auripigment. Sulph. Viv. ana* ℥iv. *Sal. Gem.* ℥iij. *cum Aceto fiat paſta in olla terrea probè lutata, ſiccetur in furno.* This, by divers Applications, will conſume this, and other Cancers: And then digeſt, deterge, and incarn, and then cicatrize with this; ℞ *Mel Diſpumat.* ℥ij. *Sevi. Hircin. Limat. Chalyb. ana* ℥iſs. *Litharg. Aur.* ℥ij. *miſce.*

Q. *But if, notwithſtanding all your Endeavours, it ſtill increaſes, what muſt be done?*

A. Warn the Patient of the preſent Danger, and propoſe *Extirpation.*

Q. *What ought to be look'd to, in order to have it ſucceed well?*

A. (1.) That the Patient be ſtrong, and of a good Habit, and not too cold, nor the *Menſtrua* ceaſed. (2.) That the Cancer be looſe, and the *Axilla* free from *painful Glands.* (3.) That it be extirpated in the *Spring* or *Autumn*, &c.

Q. *How is it to be performed?*

A. Let the Patient be placed in a clear Light, and held ſteady, and dexterouſly paſs two Needles made for that purpoſe, thro' the Breaſt croſs-ways, over which paſs Tape from one to t'other,

for Hold for your Fingers; by which pull it to you with one Hand, and, with the other, nimbly make Inciſion, and cut it off as cloſe to the Ribs as poſſible that no Parts of it remain behind. But if any *cancerous Gland* ſhould remain, be ſure to have actual Cauteries of different Sizes ready hot by you, to conſume it, and to ſtop the Bleeding; or otherwiſe apply, for reſtraining the Hemorrhage, Dorſels dipt in ſcalding-hot *Ol. Terebinth. per ſe*; or Buttons dipt in the ſame; firſt arm'd with the common Reſtrictive, and ſo laid to the Mouths of the Arteries; and over all, Pledgets armed with the ſame: then after good Boulſtering and Rolling, conveniently place the Patient in Bed, and at Night give her an *Anodyne Draught*. But the moſt certain and decent way is, to make a Ligature on the Ends of the Arteries, and then you are ſafe from a Hemorrhage, beyond all diſpute. Then the ſecond or third Day open it, digeſt, deterge, incarn, and cicatrize, as in other Amputations; keep the Body ſoluble, and take care to prevent a Fever: Alſo now make one or more Fontanels; for if any evil Quality remains in the Humours, the Ulcer will hardly cicatrize.

Q. *But if notwithſtanding, the Lips do grow* callous, *what will you do?*

A. Then timely attempt their Eradication, by actual Cautery, leſt you repent it when it is too late.

Q. *But is there no other Way, but this frightful one?*

A. Some pretend to do it by Cauſticks, but it is ſo often to be repeated, before it can have its Effect, that the Remedy proves worſe than the Diſeaſe.

CHAP.

CHAP. XXII.

Of a Diſcoloured, and Varicous Ulcer.

Q. *WHat are the unnatural Colours which poſſeſs an* Ulcer?

A. They are in Number four; *(viz.)* red, yellow, livid, and black.

Q. *What is the Cauſe of theſe?*

A. Either Blood offending in Quantity or Quality, or too hot, or from too hard Bandage, or by ſurfeiting, by ſolemn Evacuations ſuppreſs'd, and by things apply'd too cooling, *&c.*

Q. *How will you remove the red Colour?*

A. The Diet muſt be cooling and moiſtening, let his Rollers be dipt in *Acet. Roſar.* and *Aq. Font.* and not rolled too ſlack; avoid violent Motion, provoke natural Purgation, if ſuppreſs'd: Blood is to be drawn, if it abound, and the Part is to be ſcarrified, *&c.* if needful.

Q. *How is the livid Colour to be removed?*

A. If it proceed from Cold, which you may eaſily perceive, make uſe of ſuch Medicines as are able to reduce the Part to its natural Heat, made *ex Rad. Rapi, Raphani, Pulv. Caryoph. Ol. Lini Vet. q. ſ. & fiat Cataplaſm.* And, if need be, uſe Scarrifications, Cupping-Glaſſes, *&c.*

Q. *How is the black Colour to be removed?*

A. Scarrify the Parts deep, and foment them well, and treat it as the beginning of a *Mortification*; and if either of theſe Accidents happen to an *Ulcer*, let them be treated as here directed, till the Part comes to its natural Colour; and then go forward, as has been taught in the Cure of compound *Ulcers*.

Q. *What is a* Varix?

A. It is a Dilatation of a Vein, cauſing a Tumefaction of it, with Windings and *Tortuoſity*, ariſing in ſome part of the Body.

Q. *Why is it called a* Varix?

A. From the Likeneſs it bears to the *Protuberances*, which are ſeen in *Trees* above the *Bark*, called *Varices.*

Q. *Whence are they cauſed?*

A. Either from Blood impregnated with Spirits, or from melancholy Blood, or thro' Exceſs of Labour, or immoderate Exerciſe.

Q. *How are they to be cured?*

A. By diſcharging the Body of the offending Humours, and by manual Operation; ſhun groſs Meats; open a Vein, and give Lenitives, mixed with ſuch as purge groſs Humours, as, *Lenitiv. Elect. Pulv. Sanct.* &c.

Q. *How is their Chirurgical Cure to be performed?*

A. By *Uſtion*, by *Exciſion*, and by *taking up the Vein.*

Q. *How are theſe done?*

A. As to the firſt two, they are ſo painful and terrible, that ſcarcely any Man would undergo the Operation; therefore I ſhall ſpeak nothing of them: but as for taking up the Vein, it is thus done; Take up the *Varix*, both above and below, in both which Places make Deligation, and open the Vein between them, that the Blood may be diſcharged out of it, *&c.* and wait the Separation of the Ligatures, and heal as in other Wounds.

CHAP. XXIII.

Of Ulcers *of the hairy Scalp.*

Q. *What is an* Achor?

A. It is an ulcerous Tumor of the Skin of the Head, red and *Dug-like*, having very ſmall Holes, from whence proceeds a thin *Sanies*.

Q. *What is a* Favus?

A. It is the ſame, yet wherein the Holes are larger, and which contains *an Humour reſembling Honey*, from whence it is denominated.

Q. *From whence is it cauſed?*

A. The *primitive Cauſes* are, corrupt Nouriſhment and Contagion, and by *Contact* and frequent Converſation; the *material* Cauſe, is a ſharp, fretting, viſcous Humour; and the *conjunct* Cauſe, is the ſame Humour *impacted* in the Skin of the Head.

Q. *What are the Signs?*

A. In both *Achor* and *Favus*, there is an itching and a Tumor with Holes, and tho' often both are attended with Lice, yet it is proper for a *Favus* to have Scales.

Q. *What are your Prognoſticks?*

A If they continue long, they leave behind them a Baldneſs of the Part; but thoſe Children who have it, are freed from the Falling Sickneſs; and if it be *hereditary*, it is very hardly cured at all.

Q. *What are the Means of Cure?*

A. A convenient Diet, Phlebotomy, Purgation, and proper Applications to the *Ulcers?*

Q. *What*

Q. *What Diet is moſt proper?*

A. It muſt be cooling, moiſtening, and affording a laudable Juice; but all ſtrong, ſweet Wines, ſharp ſalt Meats, hard Eggs, Fiſhes living in muddy Water, and Purſlain, are to be ſhunn'd. As for Phlebotomy, it muſt be preſcribed and repeated; if there is a *Plethora*, or if much corrupt Blood is ſettled in the Veſſels of the Head, purge with *Conſect. Hamech. Syr. Roſ. ſolut. cum Agarico, Pulv. Sanct. Troch. Alhandal*, &c. Purge with ſome of theſe once a Week: Alſo *Sternutatories* may be uſed, if it be thought neceſſary.

Q. *What are proper external Applications?*

A. They muſt be ſuch as are aſtringent and repelling, which we diſcourſed of in the Doctrine of Tumors. *Butyr. Recent. Axung. Porcin. Sulph. Viv. Helleb. alb. & nigr. Calc. Viv. Merc. Crud. Litharg. Gallar. Alum. Acet. Ol. Vet. Pic. Liquid.* &c. Pull out the Hairs, then foment with a Decoction of *Vin. Rub. Cort. Granat. Bacc. Myrtillor. Fol. Roſ. Rub.* &c. and then apply your Unguents.

Q. *Are theſe Medicines to be uſed indifferently to all?*

A. No: But to Children apply the milder ſort; and in all, proportion things according to Art.

Q. *But ſuppoſe the* Ulcers *be very moiſt, and apt to be inflamed by the Application of unctuous Medicines?*

A. Then inſtead of *Axung.* or *Butyr. Rec.* make up your Medicines with *Oxymel Simplex*, and abſterſive Powders, and *Farin. Hordei*, and over them a *Cap of Ivy-Leaves* ſewed together.

Q. *What is that Ulcer of the Head which is called* Tinea?

A. It is a cruſty fretting Ulcer of the Skin of the Head, without very much Moiſture, corrupting the Roots of the Hair, and ſending from the Skin

Skin a dry ſtinking Filth, which is commonly called *a Scall'd Head.*

Q. *From whence is it cauſed?*

A. Either from things not natural, or corrupt Milk, or Contagion, or elſe is hereditary.

Q. *What are the Signs of this Diſeaſe?*

A. It is known by its dry cruſty Scales, which are ſometimes yellow, ſometimes Aſh-colour'd, or greeniſh; but moſt commonly white, and never altogether black.

Q. *What are the Preſages of the Diſeaſe?*

A. (1.) It is very hard of Cure. (2.) If the Skin be hard, and many Scales appear, and the Hair falls away, it is of moſt difficult Cure. (3.) When it is cured, it often leaves behind it Baldneſs. (4.) The older they are, the harder of Cure.

Q. *What Indications offer themſelves in the Cure?*

A. (1.) To remove the Cauſe: And, (2.) to cure the Ulcer by *proper Means:* The firſt is done by rightly ordering the Non-naturals, by *Cathartick*s and *Phlebotomy*, as was directed in an *Achor* and *Favus*; only remember to add *mercurial Preparations to your Cathartick*s, and repeat *Phlebotomy* at leaſt once a Quarter, or oftner if it be neceſſary.

Q. *How is the Ulcer to be cured?*

A. Take care to avoid meddling with tender Children, until they are able to bear ſharp Medicines; but in the Interim, that ſomething may be done, you may apply to the Part, a Liniment *ex Ol. Ovor. Croc. Martis & C. C C.* and lay over it a Cap of Ivy-Leaves; but apply Repercuſſives, for the Humour is ſo thick that it cannot be repell'd.

Q. *How will you proceed?*

A. Firſt, Procure the Separation of the Scale: Secondly, Pull out the Hairs by the Roots; and Thirdly, Heal the Ulcer.

Q. *How*

Q. *How will you cauſe the Scales to fall off?*

A. By Unguents made *ex Ol. Ped. Bov.* and Mucilages *ex Rad. Altheæ, Sem. Lini & Fœnugr.* &c. And I have known where, green Ellicampane-Roots, boil'd tender, pith'd and pulp'd through a Sieve, and mixed with a fourth part of Hog's-Lard, have been uſed with great Succeſs; being daily anointed on the Part.

Q. *How will you then cure the Ulcers?*

A. Either with *Unguent. Enulat. cum Merc.* and over it *Empl. de Ranis cum Merc.* Or, ℞ *Succ. Fumar. Oxylapath. Acet. ana* ℥iv. *Ol. Vet.* ℔j *Coq. omn. ad Succ. Conſump. & adde Pulv. ſequent.* ℞ *Helleb. alb. & nigr. Sulph. Viv. Calc. Viv. Alum. Gallar. ana* ℥ſs. *Virid. Æris* ℥ij. *Pic. Liquid.* ℥iſs. *Ceræ q. ſ. fiat Ceratum*, and apply it. And, while this is doing, purge once a Week; which is all we need diſcourſe of, with relation to this Diſtemper, being in every Chapter confined to Brevity; our Deſign being only to give the young Artiſt a rational Idea of his Art, without a multitude of Words.

CHAP.

CHAP. XXIV.

Of Ulcers *of the Ears.*

Q. *What is the Cauſe of Ulcers in the Ears?*

A. A Blow, a Fall, or a ſharp Humour ſent from the Brain.

Q. *What are the Prognoſticks in this Caſe?*

A. (1.) If the Cure be neglected, Deafneſs enſues. (2.) If greater Plenty of Matter comes forth, than it is reaſonable to ſuppoſe the Ears can produce, then you may be ſure, that the greateſt part of it comes from the Brain. (3.) If before the Matter comes out, the Patient feels great Pain and Pulſation, it certainly proceeds from a *Phlegmon* bred there.

Q. *How will you proceed in the Cure?*

A. Before any thing be applied, purge the Head with *Pil. Coch. maj.* or *Pil. de Aggregativ. Diagrid.* &c. (2.) Let the Applications be neither too hot, nor too cold. (3.) Let them be all liquid. (4.) After dreſſing, let the Patient for ſome time lie upon the well Side, the diſeaſed Ear being ſtopped with Wooll. (5.) Avoid all oily and fat Medicines.

Q. *What local Medicines will you uſe?*

A. Crocus Martis, boil'd ſtrongly in Aceto: Alſo *Fol. Alchimil. Sigil. Solomon. Plantag. Equiſet.* &c. boiled and made into a Syrup; which will be the better by adding *Cort. & Flor. Granat. Sumach. Bacc. Myrtillor. & Fol. Roſ Rub.*

Q. *How will you know if the Ulcer have Worms in it?*

A. By

A. By their Motion they will cauſe intolerable Itching.

Q. *What will you dreſs with in ſuch a Caſe?*

A. With a ſtrong Decoction, *ex Cereviſ. non lupulat. & Fol. Nicotian.*

Q. *What muſt be done if a* Fungus *riſes, and fills up the Cavity of the Ear?*

A. (1.) Purge the Head. (2.) Conſume the *Fungus* by a careful Application of *Realgar. alb. Auripigment. & Calc. Viv. ana p. æ.* (3.) Inject into the Ear, *Vin. Alb. Mel. Roſar. & Ægyptiac.* (4.) To heal it, inject ſome vulnerary Syrup in *Aq. Plantag.* or *Roſ. Rub.*

CHAP. XXV.

Of an Ophthalmia.

Q. *What is an* Ophthalmia Vera?

A. An Inflammation of the *Tunica Adnata* of the Eye, attended with Tumor, Pain, Heat, flowing of Tears, the Eye-lid is turned up and ſomewhat ulcerate, *&c.*

Q. *What are its Cauſes?*

A. Either a Blow, a Fall, or ſharp Humours, or Oil, Smoak and Duſt.

Q. *What are the Differences of an* Ophthalmia?

A. They are either Mild or Malignant; the Mild is when only the *Adnata* is inflamed; the Malignant, when it ſeizes it with the other Symptoms before mentioned.

Q. *Why ſhould Oil cauſe this Diſeaſe?*

A. Becauſe it cleaves faſt to the Tunicles, ſtops the Pores, and ſo keeps in the Heat and inflames the Eye; and the Heat, being pent in, burns when it

it cannot breathe through, and inflames the Humours, and ſo cauſeth an *Ophthalmia*.

Q. *What are the Prognoſticks?*

A. That coming from an external Cauſe, is more eaſily cured than that of an internal one. If a Pain in the Head is joined with it, and it continue long, Blindneſs may be feared. (3.) If the Humour be thick, it will not continue long. (4.) If the Matter be very much and thin, it is like to continue long.

Q. *What are the Intentions of Cure?*

A. A proper Diet, Phlebotomy, Purgation, *Collyriums*, and a Seton, or Fontanel.

Q. *What particular Rules are to be obſerved?*

A. He muſt be ſparing in Meat and Drink, abſtain from *Venery*, and keep the Body ſoluble; let his Sleep be moderate, and the Room kept dark; let the Objects he looks on be green: if his Hair be on, cut it off; and, if Strength will permit, bleed him; or if not, apply Cupping-Glaſſes to his Shoulders; and, *to ſtay the Fluxion*, apply a ſtrong *Defenſative* to the Forehead and Temples.

Q. *Of what Qualities muſt your local Medicines be?*

A. Something aſtringent, cooling and anodyne; as, *Aq. Alb. Ovi, Mucilag. Sem. Cydonior. Fœnugrec.* &c. drawn with *Aq. Plantag.* Or, *Aq. Roſar. cum Minim. Croc.* Alſo, *Troch. Alb. Rhaſ. ſine Opio, diſſolv. in Aq. Sperm. Ran.* Or, *Aq. Euphragiæ cum Pulv. Tutiæ*, &c.

Q. *But ſuppoſe this does not do the Work?*

A. Then apply Cupping-Glaſſes, and make a Seton in the Neck, and purge and bleed, as has been directed.

Q. *What is the* Tunica Adnata?

A. It is the outmoſt Tunicle of the Eye; it ſprings from the *Pericranium*, and is ſpread over

all the White of the Eye, above the *Sclerotica*, reaching as far as the *Iris*; by which the Eye is kept firmly within its *Orbit*, and from whence it is called *Conjunctiva:* It is of moſt *exquiſite Senſe*, and has many *capillary Veins* and Arteries creeping through it, which appear very plain in an *Ophthalmia*, or Inflammation of this Tunicle.

CHAP. XXVI.

Of the reſt of the Ulcers *of the Eye.*

Q. *WE have ſaid enough with relation to an* Ophthalmia; *inform me now what other Ulcers the Eye is ſubject to: And firſt name the mild ones?*

A. They are in number ſeven, four ſuperficial ones, and three deeper: The firſt is called in Greek ἀχλὺς, *Achlys*, in Latin *Caligo*, in Engliſh a *Miſt*; it is a very ſuperficial Ulcer, of a bluiſh Colour, poſſeſſing the greateſt part of the Black of the Eye. The ſecond is called νεφέλιον in Greek, in Latin *Nubecula*, in Engliſh a *Cloud*; this is deeper, but narrower and whiter than *Caligo*. The third is called ἄρχεμον; it is an Ulcer growing about the *Iris*; poſſeſſing part of the White and part of the Black of the Eye; without the *Iris*, it looks red; and within it, white. The fourth ſuperficial *Ulcer* is called ἐπιφυμα; this makes the *Cornea* rugged, and of an Aſh-colour, reſembling a Lock of Wooll. And now the fifth *Ulcer*, (which is the firſt of the deeper ſort) is called βόθειον in Greek, and *Foſſula* in Latin; it is a hollow, narrow *Ulcer* of the *Cornea* without Filth; it is like a Puncture, or *Dint*. The ſixth is called κοτλωμα;

the ſame with *Foſſula*, only it is ſomething wider, and not ſo deep. The laſt *Ulcer* of the *Cornea* is called ἔγκαυμα, *inuſtio*; it is an impure and cruſty *Ulcer*, thro' which the Humours of the Eye ſometimes come out, and then it is called *Procidentia:* Of which there are four kinds; as, (1.) If it fall out but very little, it is called *Caput Muſcæ*, and *Formicalis*, the Head of a Fly, or Piſmire. (2.) If it fall down yet more, and equal a Grape in Bigneſs, it is called *Uvea*, or *Uvatio.* (3.) If it falls down yet more, and hangs down like a little Apple, it is called *Malum*, or the Apple-like Rupture. (4.) But if it fall down, and grow hard, brawny and flat, it is called *Clavus*, or the Nail-like Rupture.

Q. *How are theſe to be cured?*

A. Theſe four laſt are altogether incurable; only the Apple-like and Grape-like Rupture, if the Roots are ſmall, may by Ligature be taken off, but the Sight is not to be reſtored.

Q. *How will you proceed in the Cure of the reſt?*

A. Proceed as directed in the Cure of an *Ophthalmia*; let your *Catharticks* be gentle, and avoid any thing that may cauſe *Vomiting*; and as to local Medicines in ſuperficial *Ulcers* of the *Cornea*, let them be ſuch as theſe: *Succ. Rutæ, Chelidon. Euphrag. Sacc. Cand. Aloes, Sarcocol. Fel. Capon. Croc. Metallor. Camphor. Tutia*, &c. But if the *Ulcers* be of the deeper ſort, then uſe ſuch as theſe: *Plumb. Uſt. Antimon. Æs Uſt. Gum Arabic. Croc. Angl. Opium, in Aq. Roſ. vel Plant.* &c. And dreſs the *Ulcer* four times a Day, and purge once a Week; and a right uſe of the Non-naturals muſt be enjoined. Let the Drink be ſmall Beer, the Food of eaſy Digeſtion; avoid baked and fried Meats, and all ſtrong Spices, Muſtard, Garlick, Onions, Peaſe and Beans; and, inſtead of com-

mon Salt to your Meat, uſe this, ℞ *Flor. Euphrag. Sem. Fœnicul. ana* ʒj. *Cinam. & Mac. ana* ℈j. *Sal. Com.* ʒj. *miſce, fiat pulvis.*

Q. *What* Ulcers *of the Eye do you call Malignant?*

A. They are in number five, three contagious, and two not contagious; (*viz.*) *Carbunculoſa, Venerea, Morbilloſa, Nome*, and *Cancroſa.* The *Nome* ſometimes begins at the Córner of the Eye, ſometimes at the White, and ſometimes at the *Cornea*; this *Ulcer* is dangerous, and ſeldom cured without loſs of Sight. *Ulcus Cancroſus* has a thin darkiſh Humour proceeding from it, is very painful, and incurable; all that can be done, is to give the Patient ſome Eaſe by Anodyñe Cataplaſms and *Collyriums*, and a ſtrict Courſe of Living.

Q. *How will you conjecture when the Small-Pox is like to produce* Ulcers *in the Eye?*

A. If there was an Inflammation in the Eyes, before any Pocks appeared in the Body; if he feels a great Pain in his Eyes, and cannot open the Lids.

Q. *What is to be applied in ſuch a Caſe?*

A. Mucilages of *Sem. Cydonior. Lini, Fœnugrec.* &c. made with *Aq. Roſar.* or *Lac Mulieb.* with Saffron in it.

Q. *But ſuppoſe theſe* Ulcers *proceed from a* Venereal Cauſe?

A. Firſt cure the Pox, and theſe *Ulcers* will vaniſh; however, as ſomething in the mean time muſt be done, ℞ *Vin. alb.* ℔j. *Aq. Plantag.* ℥vj. *Auripigment.* ℥ij. *Virid. Æris* ʒj. *Aloes, Myrrh. ana* ℈j. *fiat Collyrium*, &c.

Q. *But if through Neglect, or Ignorance, the Eyelid grows to the* Conjunctiva *or* Cornea, *what muſt be done?*

A. This is called in Latin, *Coalitus:* If the Lid cleaves to the Black, the Sight is altogether hindered;

hindered; but if to the White, it is only impaired: and ſometimes they cleave to neither, but to one another. And now as to the Cure; if the Eye-lid cleave to the *Cornea*, againſt the *Apple* of the Eye, the Sight never will be perfect again. But in attempting the Cure, proceed thus; Place the Patient in a convenient Poſture, and lift up the Eye-lid which cleaves to the Membranes, and put between it and the Membrane, in that Part which is free, a fit Inſtrument, blunt on the back part, and very ſharp before, and the Point armed; then artificially and dextrouſly ſeparate the Parts united, taking care not to hurt the Eye: Then apply a *Collyrium, ex Aq. Plant. & Troch. alb. Rhaſ.* and keep the Parts aſunder with ſmall Dorſels of Lint, put between the Parts disjoined, and wet Boulſters in the *Collyrium*, and apply over all, and roll him up: Dreſs it twice a day, and continue this Method till it is whole.

CHAP. XXVII.

Of an Ozæna.

Q. *What is an* Ozæna?

A. It is a malignant *Ulcer* in the Noſtrils, about the Holes of the *Ethmoides*, cauſed of ſharp Humours eroding the Parts, attended with a ſtinking Smell, and ſometimes with Cruſts.

Q. *What are the Prognoſticks in an* Ozæna?

A. (1.) They are all hard of Cure. (2.) That which is hid, is of a harder Cure than that which appears.

Q. *Why are they hard of Cure?*

A. (1.) Becauſe the Brain ſends plenty of corrupt Humours. (2.) Becauſe the Part is of a moiſt Nature.

Q. *How is ſuch an* Ulcer *to be cured?*

A. By obſerving a good Diet, as in other *Ulcers* has been taught, and by Phlebotomy and Purging; and laſtly, by fit Applications.

Q. *What think you of* Mercurial *Preparations?*

A. They are moſt effectual in the Cure of this *Ulcer*, whether it be ſimply of it ſelf, or a Symptom of the *Pox*.

Q. *Well; but what are your local Medicines?*

A. I will firſt endeavour the Removal of the Cruſt, which is fixed in the fore-part of the *Os Ethmoides*, or *Os Cribriforme*; *which I do thus:* I turn the Patient's Face upwards, and his Head bent back; then with a Feather, I drop in warm, Morning and Evening, *Ol. Amydg. Dulc. & Sperm. Ceti* mix'd, and let him at the ſame time draw in his Breath, till he feels the Taſte of it in his Mouth;

Mouth; and this Method I continue every Day, till the Cruſt is ſoft; which, when I find it is ſo, I then, (after dropping in the Oil) at every Dreſſing, cauſe him to ſnuff ſome *ſternutory Powder* up his Noſe, which, by cauſing him to ſneeze, will force out ſome of the looſe Cruſt: Which Method I daily uſe till all is diſcharged; then, inſtead of the Oil, uſe a Compoſition made of ſome of theſe Medicaments, *Aq. Plantag. Fol. Querci, Alum. Balauſt. Spir. Vitriol. Mel. Roſ. Syr. Roſ. Sicc.* &c. Which muſt be injected warm twice a Day; and after Injection, that the Part may not ſoon become dry, apply ſome fit Unguent: as *Unguent. Tutiæ alb. Camph. ana* ℥ſs. *Mercur. Dulcis*, ʒj. *miſce*, &c. Which Method, if rightly followed, will anſwer your Deſires, without applying the actual Cautery.

Q. *What is the* Os Ethmoides, *where you ſay the Seat of an* Ozæna *is?*

A. It is ſometimes called *Ethmoides*, and ſometimes *Os Cribriforme*, indifferently: It is the ſecond common Bone of the Scull and upper Jaw: It is ſeated in the *middle Baſis* of the Forehead, at the top of the Noſtrils, and join'd by a *Suture* to the *Os Frontis*; it, like a Sieve, hath many Holes, by which the *Filaments* of the *Olfactory Nerves* paſs into the Noſtrils, *&c.*

CHAP. XXVIII.

Of Ulcers *of the Mouth.*

Q. *WHat is to be done when the wrinkled Skin which covers the* Os Palati *is ulcerate?*

A. Scarce any thing is more certain and ſpeedy, than this common Medicine of *Mel. Roſar. & Alum. uſt. ana q. ſ.* Or, *Aq. Plantag. & Mel. Roſar. cum Ol. Sulph. q. ſ.* And afterwards heal with *Syr. è Roſ. Sicc. & Spir. Vit. q. v.*

Q. *But ſuppoſe the* Os Palati *is bare?*

A. Then to the former Syrups add ſome *Pulv. Sarcocol. Irid. Maſtich. Far. Hord.* &c.

Q. *What muſt be done if a Piece of the* Os Palati *fall away?*

A. If it is but a ſmall Piece, you muſt keep the Brims of the *Ulcer* raw, and uſe the Incarnatives here preſcribed, and Union may be procured; but if a large Piece come away, all Hopes of Unition are gone; and all that can be done, is, to cauſe the Patient to wear a Plate of Silver to ſupply the Defect.

Q. *If the Tongue prove ulcerate, what will you apply?*

A. If it be *mild*, a Decoction of *Hord. Gallic. Altheæ, Liquorit.* &c. *cum Syr. Violar.* may ſerve; but if the *Ulcers* be malignant, as ſometimes this Part is ſeized with a *Phagedæna* and *Nome*, be ſure to adminiſter in time *Merc. Dulcis*, in fit Doſes, and often repeated, and apply'd to the *Ulcer* alſo: And as to the reſt of the Cure, it may be gathered from what is already delivered in the Chapter of *Phagedæna*, &c.

Q. *What*

Q. *What is your Method in* Ulcers *of the* Uvula?

A. If they be mild, thoſe things preſcribed in *Ulcers* of the Tongue may ſuffice; but if the *Ulcer* be fretting, it is either to be cured by *Exciſion*, or by fit Applications; (*viz.*) make a Gargle, *ex Fol. Plantag. Veronic. Sigil. Solomon. Scord. & Origan.* In which diſſolve *Mel. Anglic. q. v.* And after gargling, touch the *Ulcer* with *Mel. Roſar. Alum. uſt. & Ægyptiac.* warm; and do this twice a day till it be well.

Q. *But if you find it proves rebellious, and yields to no Applications, how muſt it be cut off?*

A. Firſt purge the Body; and if the *Uvula* be ſmall about the Root, it will be ſo much the better (nay, indeed it will not be ſafe without it;) then with Sciſſors, or other fit Inſtrument, cut it off, and cauterize the Part with a red-hot *Uvula Spoon*, or other fit Inſtrument, to reſtrain the Flux of Blood, *&c.*

Q. *If the* Tonſillæ, *or* Almonds, *be ulcerate, how are they to be cured?*

A. Make an Electuary, *ex Rad. Irid. Florent. Cent. min. Myrrh. & Mel. diſpumat.* and be often applying it. And if the Throat be ulcerate beyond the *Uvula*, ℞ *Aq. Limat. Ferri & Plantag. ana* ℔ſs. *Flor. Roſ. Rub. Balauſt. ana* ℥vj. *Alum. Rup.* ℥ij. *Digerant. in Arena per Hor.* xxiv. *& Coletur pro uſu:* And give *Mercur. Dulc.* inwardly, as you ſee Occaſion. And if they are hard, and much tumified, and in a long time yield to no Applications; but are troubleſome, and apt to choak the Patient; the readieſt way is Exciſion: which is not difficult to do, with the Probe-Sciſſors, if Ligature be made on the Part; and the *Hemorrhage* may be readily ſtopp'd with a Gargariſm of Oxicrate, or by applying gently a Cautery-Button.

CHAP. XXIX.

Of Wounds.

Q. *WHat is a Wound?*

A. It is *properly* a Solution of Continuity in any Part of the Body, caused by an external cutting Instrument; it is in Greek called τραῦμα, in Latin *Vulnus.*

Q. *How many Intentions are there in the Cure of a Wound?*

A. Five; *viz.* (1.) To draw forth any extraneous Body. (2.) To bring the Lips together. (3.) To retain the same. (4.) Preserving the Tone of the Part. (5.) To correct Accidents that have already seized on the Part, and to prevent others.

Q. *What do you term* Extraneous *Bodies?*

A. Shot, Hair, Rags, Dirt, Gravel, Splinters, or whatever is foreign to the Part wounded; which are to be extracted with that variety of Instruments, that the Nature of the Body and Position of the Member requires.

Q. *Is this a general Rule without Exception?*

A. No: For where you see the Wound is of itself mortal, and where it cannot be done but with great Pain and Difficulty, and where the Wound may be cured without it, or leaden Bullets lodged deep in the great Joints, in these Cases Extraction is not to be attempted.

Q. *Which way are extraneous Bodies to be extracted?*

A. By the same way they went in, except there is more fear of a Flux of Blood, or cutting a Nerve,

Nerve, by the Extraction that way than on the contrary Part; or that the Figure of the extraneous Body is ſuch, that it will not ſo eaſily paſs back the ſame way it went, as it will through the Part oppoſite.

Q. *How is Bleeding in a Wound to be ſtopped?*

A. (1.) By reſtringent Medicines, as *Pulv. Galeni*, *Bole*, &c. mixed with *Poſca.* (2.) By Deligation of the Veſſel. (3.) By Injection of aſtringent Medicines, when we cannot come at the Veſſel. (4.) By the actual or potential Cautery. (5.) By good Compreſs and Bandage.

Q. *How many ſorts of Union are there in a Wound?*

A. Two; (*viz.*) *Symphiſis*, and *Syſſarcoſis.*

Q. *What is* Symphiſis?

A. It is the Union of Parts disjoined, *no* middle Subſtance coming between; and this is called healing, *by the firſt Intention.*

Q. *What is* Syſſarcoſis?

A. It is the Union of Parts disjoined *by* a middle Subſtance.

Q. *How are the Parts disjoined, brought together, and retain'd ſo?*

A. By ſtitching the Wound, and by good Bandage.

Q. *How is the Tone of the Part to be preſerved?*

A. (1.) By a right ordering of the Non-naturals. (2.) The Medicines may not exceed in any Quality; (*viz.*) either hot, cold, moiſt, or dry. (3.) Bandage muſt be uniform, and neither too hard nor too ſlack. (4.) Take care, by a ſpare Diet, Lenitives, and Phlebotomy, to keep the Body from a Fever. (5.) Let them abſtain from *Venery*

Q. *What are reckon'd* Accidents *in a Wound?*

A. Pain, Inflammation, Convulſion, and Mortification.

Q. *How*

Q. *How are theſe corrected?*

A. As for Pain, if it proceeds from any external Cauſe, as hard Bandage, extraneous Bodies, *&c.* it is to be remedied by *looſening* the one, and *extracting* the other; but if from neither of theſe, then *Anodynes* are to be apply'd, ſuch as have been already preſcribed. *Inflammations* are remedied by Phlebotomy, Lenitives, and cooling Applications. In *Convulſions*, recourſe is to be had to *Unguent. Martiat. Ol. Succini, Juniperi, Spir. Caſtorei, Salviæ, Lavendulæ, Ol. Rutæ, Lumbricor. Vulpin.* &c. Some apply'd to the Part, ſome given at the Mouth, ſome by Clyſters, and ſome ſmelt to. And a *Mortification* is remedied by Scarrification, Fomentation, *Ol. Terebinth.* ſcalding hot, *Spir. Vin. Ægyptiacum, Mercur. Præcipit. Rub.* &c.

Q. *What ſort of Wounds are to be cured by* Symphiſis, *or* Agglutination?

A. All, whoſe Lips can conveniently be brought and kept together, by *ſtitching* and *rolling*, and where there is no great Contuſion, nor loſs of Subſtance.

Q. *What is to be obſerved when you come to ſtitch a Wound?*

A. (1.) Let it be done gently. (2.) Let the Parts be equally brought together. (3.) If the Brims be ſtiff, by reaſon of long being undreſs'd, let them be fomented with *Hydrelæum.* (4.) No *Dorſel* nor *Pledget* muſt be put between the Parts.

Q. *What is* Hydrelæum?

A. Oil and *Water* mixed, according to diſcretion.

Q. *How many ſorts of Stitching are there in common uſe?*

A. Two; (*viz.*) *Laqueatio*, or dry Stitching, and *Sutura*, or Stitching with a Needle.

Q. *What is* dry Stitching?

A. It

A. It is when Pieces of Cloth, cut *jagged*, or *Saw-like*, being placed on each ſide of the Wound, are ſtuck on, by a fit Medicine, and ſo the diſjoined Parts are brought together; and the Pieces of Cloth being ſewed to each other over the Wound, keep it in a *uniting Poſture*, without paſſing a Needle through the Fleſh or Skin.

Q. *In what Caſes do you apply the* dry Stitch?

A. (1.) If we cannot come conveniently to roll the wounded Part, as in all tranſverſe Wounds. (2.) In Wounds of the Face, to avoid a Scar. (3.) If the Patient will not admit of Stitching.

Q. *How is the Cloth to be prepared?*

A. (1.) The two Pieces muſt exactly anſwer to one another. (2.) Let them be either doubled or hemm'd. (3.) Let them be ſtrong, that they yield not to the Stitch.

Q. *By what Means are theſe Cloths made to ſtick?*

A. Diſſolve *Ichthyocolla in Aceto, & coq. ad Conſiſt. Empl.* Or Medicines may be formed *ex Farin. Volat. Maſtich. Gipſi, Gum. Tragacanth. & Arabic. Bitumen, Colophon, Albumen Ovi*, &c. Theſe ſpread upon the Cloths, muſt be apply'd and ſuffer'd to dry on, before they be ſtitched, that they may not give way, and let the Stitches be about an Inch aſunder. You may compound your Matter for the *dry Stitch* thus: ℞ *Pulv. Bol. Ver. & Maſtich ana* ʒj. *Thuris pinguid.* ʒiſs. *Taccamahac.* ʒij. Mix them well with a hot Peſtle and Mortar, and ſpread it, and let it lie on ſome time for it to ſtick well, before you ſtitch the Cloth.

Q. *How many ways are there of Stitching with a Needle in Wounds?*

A. Firſt, the Glovers Stitch, which is uſed in the wounded Guts, *&c.* The ſecond kind is performed by taking divers Stitches, as far diſtant as the nature of the Wound requires, and at every Stitch

Stitch to cut the Thread. The third is called *Gaſtroraphia*; this is made uſe of when the *Peritoneum* is divided by a large Wound, (and ſhall be diſcourſed of, when we come to treat of Wounds of that Part.) The fourth is, when the Needle is left in the Wound, being paſſed thro' both Parts, and the Lips brought cloſe together, and the Thread paſſed about both Parts, *as when a Taylor faſtens it on his Sleeve:* And this ſort of Stitch is of uſe in *Hare-Lips*, and in Wounds of the *Aſpera Arteria*, or Windpipe; but if you ſee fit, the Ends of the Needle may be ſnipped off.

Q. *Of what uſe is Stitching in Wounds?*

A. To keep the Lips of them cloſe, in order to their ſpeedy healing, and to reſtrain their bleeding.

Q. *What is to be obſerved in Stitching?*

A. (1.) Beware of Nerves. (2.) In long Wounds begin from the Ends, in ſhort ones in the Middle. (3.) Let the Stitches be diſtant the breadth of a Finger. (4.) In deep Wounds, let the Stitches be deep; in ſuperficial ones, the contrary. (5.) In Wounds made according to the length of the Member, ſtitching is not ſo neceſſary, becauſe rolling will do the Work near as well.

Q. *What is* Faſciatio, *or Rolling?*

A. It is when we labour to keep the Lips of the Wound together by Slips of Linen-Cloth, cut in a *due length* and *breadth*, and made of Cloth only *half-worn*, and of an *indifferent fineneſs*.

Q. *How long is it generally before Wounds that are ſtitched are agglutinated?*

A. Commonly in two, three, or four Days, if they are well managed; and then the Stitches may be cut, and the Threads drawn forth.

Q. *How many kinds of* Rolling *are commonly in uſe?*

A. Four;

A. Four; (*viz.*) *Incarnativa*, *Retentiva*, *Expulsiva*, and *Æquans*; which are better understood by Practice, than described by Words.

Q. *In what Cases are we to reject the Cure of Wounds by* Agglutination, *and heal them by* Concarnation?

A. (1.) If there is loss of Substance. (2.) In great Wounds of the *Joints*, and when the *Ligaments* and great *Tendon* of the Heel are cut in sunder. (3.) When we look for the *Scaling of a Bone*, or the Separation of a Piece of a *Ligament* or *Tendon*. (4.) When the *Jugular Veins* and *Soporal Arteries* are divided in Wounds of the Neck.

Q. *How is* Incarnation *performed?*

A. It has been already taught in the Doctrine of *Ulcers*, to which you are to have recourse.

CHAP. XXX.

Of Gun-Shot Wounds.

Q. ARE *Gun-Shot Wounds* poisonous?

A. No: For both the Shot and most of the Ingredients of the Powder are used, both internally and externally, for the Cure of several Diseases, with success.

Q. *What are the* Symptoms *of a Gun-Shot Wound?*

A. Contusion, Pain, Inflammation, Convulsion, Heat and Change of Colour, being sometimes of a blue or Violet-Colour, sometimes the Wound is black, and the Parts adjacent livid, *&c.*

Q. *What are the* Prognosticks *in these Wounds?*

A. If only a fleshy Part be wounded, and the Constitution good, it is of easy Cure; but if the Constitution be bad, with Fracture of the Bone, or

or Laceration of the Nerves, Tendons, and Ligaments, the Cure is difficult, and at the beſt they are harder of Cure than other Wounds.

Q. *Why?*

A. (1.) By reaſon of the *Contuſion* which always attends them. (2.) They more *ſlowly digeſt* than others, becauſe the *natural Heat* is much abated, and the *Spirits diſſipated*, by reaſon of the *Contuſion.*

Q. *How many* Intentions *are there in curing theſe Wounds?*

A. (1.) To draw out all *extraneous Bodies*, as Bullets, Pieces of Garment, contuſed Fleſh, Shivers of Bones, *&c.* And, (2.) To apply *convenient Medicines.*

Q. *What is your Method of Cure?*

A. Extraneous Bodies being extracted, if the Wound bleeds much, dreſs it up for the preſent with Reſtrictives and good Bandage, and at the next dreſſing haſten to convert the contuſed Fleſh into *Pus*; which may be done by arming your Tents with a Liniment compos'd *ex Tereb. Ven. Mel. Myrrh. Croc. Angl. Vitel. Ovi. Ol. Catellorum*, &c. with which arm your Tents and Pledgets; and over the Wound (to eaſe Pain, and cheriſh the natural Heat, and help forward Digeſtion) apply a Cataplaſm *ex Mic. Pan. Rad. Altheæ, Flor. Chamæmel. Melilot. Hyperic. Abſinth. Farin. Hordei & Fabarum, & adde Ol. Roſ.* &c. Then imbrocate the Part with *Ol. Hyperic. & Roſar.* all round; and to the Parts above, to ſtop the Flux of Humours, apply a *Defenſative.* Dreſs it twice a Day, if there be Occaſion; but in that your Judgment muſt direct you. Keep the Body ſoluble by Lenitives or Gliſters, and daily give ſome vulnerary Drink, *&c.* compoſed *ex Rad. Symphit. Alchimil. Salviæ, Verban. Scordii, Hyperic. Valerian. Plantag. Conſolid.*

Conſolid. Agrimon. Fol. Roſ. Rub. Lign. Lentiſc. &c. Or Powders and Electuaries *ex Syr. Symphit. Mummia, Bol. Ver. Macis, Sperma Ceti,* &c.

Q. *What muſt be done if a* Gangreen *be feared?*

A. Then uſe *Ol. Terebinth. Gum Maſtich, Sal. Armon. Virid. Æris, Camphor.* and *Præcipit. Rub.* alſo.

Q. *We will ſuppoſe the Wound now well digeſted, how muſt it be mundified?*

A. With *Mundificativ. ex Apio,* or *Paracelſi*; to which (if the Wound be foul) add a little *Unguent. Ægyptiac.* and if the *Sinus* be very deep, inject a Decoction, made of ſome of the *vulnerary Herbs,* in Wine, and add ſome *Mel Anglican.* &c. then incarn and cicatrize, as in other Wounds.

Q. *What Cautions are to be us'd in Dreſſing theſe Wounds?*

A. (1.) Uſe no *Eſcharotic* Medicines. (2.) Take care to ſhorten and leſſen the Tents as the Wound incarns. (3.) If the Contuſion be large about the Parts, they are to be ſcarrified. (4.) If the Parts are burned, they are to be dreſſed with ſuch Medicines as profit in Burnings. (5.) Forbear reſtringent Medicines, becauſe they keep in *putrid Vapours,* which may cauſe a *Gangreen.*

Q. *But ſuppoſe the Bone be fractured?*

A. Then it is to be reduced, and the Wound dreſſed with *Tereb. Venet. Ol. Terebinth. Hyperic. & Catellor. cum Euphorb. Tutia,* &c. which will both digeſt the Wound, and help to ſcale the Bone: but if there is a *Comminution* of the Bone, (or a Fracture) of the Joint; if you would not be counted ignorant nor careleſs in your Art, immediately amputate the Limb.

Q. *How, or with what Inſtruments, are Bullets to be extracted?*

A. If they are lodged in a Bone, the *Terebellum* is the only Inſtrument; but if in a fleſhy Part, the

the *Ducks-Bills*, *Crows-Bills*, *Cranes-Bills*, *ſmall and long Forceps*, are more proper; and the Patient muſt be placed as near as may be in the ſame Poſture he was in when the Wound was inflicted, if the Bullet cannot eaſily be found otherwiſe.

Q. *Suppoſe I find it at a* contrary Part *of the Body, and ſo cannot extract it?*

A. Then, if you feel it lying *ſuperficially*, cut upon it and take it out.

Q. *But ſuppoſe I cannot by any Means find it, will it kill the Patient?*

A. Many Men have carried leaden Bullets lodged in their Fleſh for many Years, without any manifeſt Prejudice: however, place the Patient in the Poſture he was in when he received the Wound, and try what you can do; for it is certainly beſt to extract it, if you can.

CHAP. XXXI.

Of Wounds of the Head.

Q. *WHat is principally to be conſider'd in Wounds of the Head?*

A. The moſt common are theſe; (1.) To *avert* the Humour from the wounded Part. (2.) The general Prognoſticks. (3.) To preſcribe fit Medicines to aſſuage Pain and Inflammation. (4.) Good Rolling.

Q. *How is the Humour to be* averted?

A. By Purging, Bleeding, and right ordering of the *ſix Non-naturals.*

Q. *When is* Phlebotomy *to be adminiſtred?*

A. (1.) If the Wound did not ſufficiently bleed at firſt. (2.) If it be large, and the Patient ſtrong. (3.)

(3.) If an Inflammation has ſeized the Part, or a Fever the Patient.

Q. *In what Caſes are you to purge, in Wounds of the Head?*

A. (1.) If there be *Head-Ach*, or *Lumpiſhneſs*. (2.) If there be *Tumor* or *Inflammation*. (3.) If the Body be *Cacochymical*.

Q. *What is moſtly to be ſhunn'd in theſe Wounds?*

A. (1.) All *Wine*, till fourteen Days are over. (2.) If there is a Fracture, *neither Fleſh nor Fiſh* is to be allow'd for the firſt ſeven Days. (3.) *Venery*, above all things, during the *whole Cure*.

Q. *What are the Prognoſticks in Wounds of the Head?*

A. (1.) No Wounds of the Head are to be ſlighted; for ſometimes, altho' there is no Fracture, fearful Accidents follow. (2.) It is more hard, or eaſy, according to the Climate or Seaſon of the Year. (3.) Where there is a *Pox*, or an ill Habit of Body, it is moſt difficult. (4.) *Contuſed* Wounds of the Head are more difficult than *inciſed* Wounds. (5.) Wounds in the Fore-part of the Head, are more dangerous than thoſe of the Hinder-part. (6.) Wounds of the *Temples* are moſt dangerous. (7.) Wounds on the *Sutures* are attended with the ſame. (8.) If no Fever, Convulſion, Raving, Palſy, Doating, *&c.* ſeize the Patient, and good *Quittor* appear, and the Body be ſoluble, they are all good Signs, *& è contra*. (9.) *Callus* is procured in forty or fifty Days. (10.) If a Swelling does ſuddenly vaniſh, it is an ill Sign, unleſs ſome Evacuation has gone before.

Q. *Why are* contuſed Wounds *more* difficult *than* inciſed ones?

A. Becauſe they require *greater Suppuration*.

Q. *Why are Wounds of the* Fore-part, *of more dangerous Cure than thoſe of the* Hinder-part?

A. (1.) Becauſe *more Brain* is contain'd in this Part. (2.) The containing Parts are thinner. (3.) Becauſe more *noxious Humours* may be gathered there, by reaſon of the multitude of *Cells.*

Q. *Why are Wounds of the* Temples *ſo very dangerous?*

A. (1.) Becauſe the continual Motion of the lower Jaw doth hinder *Union.* (2.) Becauſe the Branches of the *Jugular Veins* and *Soporal Arteries* are diſtributed there. (3.) Becauſe of the temporal Muſcle, on which the Motion of the lower Jaw depends, and which, being cut *thwart*, draws the Face *awry*, and impedes the Motion of the lower Jaw.

Q. *Why are Wounds on the* Sutures *dangerous?*

A. (1.) Becauſe the Scull is there parted, and ſo Matter may fall down and hurt the Brain. (2.) Becauſe of the *Ligaments* which paſs through, from the *Meninges* to the *Pericranium.*

Q. *How is the Head to be rolled?*

A. It is impoſſible to expreſs it *ſo intelligibly*, as that a Stranger ſhould by the Directions exactly perform it; let it be done *equally*, and with many *Circumvolutions*, according as the Caſe requires; the Rollers ought to be made of ſoft Linen, half worn, of about three Inches broad, or leſs; and as long as is needful: which Time and Experience will make familiar, and eaſy to you.

CHAP. XXXII.

Of Wounds of the Parts placed above the Scull.

Q. *IF a Contuſion of the hairy Scalp, without a Wound, preſent itſelf, how ought it to be treated?*

A. (1.) Immediately bleed. (2.) Uſe repelling Medicines, which ſee in the Doctrine of Tumours.

Q. *But if after the Pain is gone, a Tumor ſhould remain?*

A. Then uſe *Diſcutients?*

Q. *But if notwithſtanding all you can do, the Tumor does not vaniſh, what muſt be done?*

A. Make Inciſion, and if the *Cranium* be not foul, conclude the Cure by moderate Compreſſion, and drying and mundifying Medicines, ſuch as *Syr. è Roſ. Sic. de Abſinth. Terebinth. Aloes, Myrrh.* &c. And if the Scull be foul, firſt ſmooth the Bone with a *Raſpatory*, and endeavour to procure a thin Scale, by Application of *Pulv. Myrrh. Gentian. Ariſtol. Rot. Sarcocol. Maſtich.* &c. then incarn and cicatrize, as has been taught in other Caſes.

Q. *How is a* tranſverſe *Wound of the* temporal Muſcle *to be dreſſed?*

A. Bring the Lips cloſe together, by ſtitching the Skin; then dreſs the Wound with *Liniment. Arcæi* warm, and apply over all *Empl. Paracelſ.* a little malaxed with *Ol. Hyperic. cum Gum.* or ſome vulnerary Balſam, *&c.*

Q. *But I will ſuppoſe the temporal Muſcle wounded according to its Length?*

A. First ſtop the Bleeding, and ſtitch the Lips of the Wound, and dreſs, as I ſaid but now; then lay his Head inclining on a Pillow.

Q. *But how will you ſtop the Bleeding?*

A. If it will not be reſtrained by *ordinary Means*, then paſs a Needle through the *muſculous Fleſh* into the Wound, and from thence to the outward Part, compaſſing the *great Veſſels* with a double Thread; between which, and the Veſſels, put a little *Dorſel* of Lint, to prevent cutting aſunder the Parts, and to avoid Pain; then make *Ligation*, and dreſs him up.

Q. *Suppoſe the Wound in any other Part above the Scull?*

A. Then it is to be cured either by *Agglutination* or *Incarnation.*

Q. *How by* Agglutination?

A. First ſtitch it up uniform, then apply a Pledget dipt in *Albumin. Ovi*; the next Day dreſs with *Liniment. Arcæi* warm; and if it yield much Matter, dreſs it twice a Day, till it is well; which is commonly in four or ſix Days.

Q. *How by* Incarnation?

A. If the Bone is bare, apply the *Cephalick Powder* laſt mentioned, and over that *dry Lint*; then fill the Wound with Pledgets dipt in *Liniment. Arcæi* warm, and ſo conclude the Cure: but the way of Stitching is far better.

Q. *How are* Humours *to be* averted *from a wounded Head?*

A. To prevent Pain and Inflammation, apply a Cataplaſm, *ex Farin. Hord.* boiled in *Poſca*, or *Vin. Rub. & Ol. Roſar.* or one made *ex Medull. Panis, Lac. Recent. Unguent. Popul. Pulv. Croci*, &c. which (the Head being ſhaved, and the Wound artificially dreſt) is to be apply'd over all.

Q. *Suppoſe a* Contuſion *join'd to a Wound?*

A. First

A. First wash the Wound with *Tinct. Myrrh.* or *Spir. Vini*; and if no loss of Substance, nor the Contusion very great, stitch it, and dress with *Liniment. Arcæi*; (and if it be deep, keep a Tent in the *depending Part*, until it yields *laudable Matter*, and then take it out) and apply an *Emplaister*, or *Cataplasm* all over.

CHAP. XXXIII.

Of a Fracture of the Scull.

Q. *What are the Signs of a Fracture* in Cranio? *A.* They are either, (1.) apparent to *Sense*, or (2.) found out by a *reasonable Conjecture.* Those of the first sort are manifest to the Eye, or found out by the Finger or Probe; those of the second sort, are a Singing of the Ears, Swooning, Slumbering, Giddiness, an issuing of Blood from the Nose, Ears, and Mouth, Vomiting, Raving; the Patient often puts his Hand to the Part; there is sometimes Convulsions, Palsy of one Side, Faltering of Speech, Memory impaired, Dulness of Judgment, *&c.*

Q. *Do those Symptoms always attend these sort of Fractures?*

A. No; for I have known a Patient with a Fracture thro' both the Tables, with the Bone press'd in upon the *Dura Mater*, (without wounding it) that had none of these Symptoms, *except bleeding at the Ears:* And another that had both a Fracture and large Fissure, that had no Symptoms of either, except Convulsions for a few Hours *only.*

Q. *But ſuppoſe none of theſe Symptoms offer, and yet you ſuſpect a Fracture; by what other Method will you ſatisfy your ſelf?*

A. If the Hair be cut in ſunder, and ſtick up in the Wound, or if the Patient upon violently *chewing* of Paper on both ſides of his Jaws, feels a Cruſhing; or if he holds a Thread with a Knot at the End, hard between his Teeth, and if it be ſuddenly *jerked*, he feels a Pain in the Part, there is then room for Suſpicion. Tho' I had once a Patient, who had *all* the Symptoms of ſuch a Fracture, *at firſt*; and *ſome* of them (at times) for ſix Weeks together; yet having no Wound, nor Tumor, whereby to guide me ſo as to make Inciſion, like an Artiſt; by Cephalicks, Phlebotomy, Gliſters, Veſicatories, Cupping, and proper Topicks, the Patient recovered, and remains ſtill well, for ought I know: But I never heard of the like; and inſtance this, to caution you not to be too haſty in making *Inciſion*, leſt you do it, and find neither Fracture, Fiſſure, nor Depreſſion; and ſo be juſtly condemn'd, for Raſhneſs and want of Judgment.

Q. *What are your Prognoſticks in theſe Fractures?*

A. (1.) Pronounce not all Danger paſt, till an *hundred Days* be over. (2.) Every Fracture in the Scull is dangerous. (3.) If a Fever follows, if the Brims of the Wound grow flat at ſecond dreſſing, and do not ſwell, there is danger. (4.) If the Wound grows dry, or is black, the Tongue falters, Memory fails, the Eyes grow dim, a weak Pulſe, and Palſy or Convulſion, Death is at hand; but if none of theſe Signs, then hope the beſt. (5.) Wounds with a Fracture of the *Sinciput*, or Fore-part of the Head, are more dangerous than thoſe of the *Occiput*, or Hinder-part. (6.) Fractures in the *Temple Bones* are moſt dange-

dangerous: And (7.) ſo are thoſe on the *Sutures.*

Q. *Why are Fractures on the* Sinciput *worſe than thoſe of the* Occiput?

A. (1.) Becauſe theſe are more thin than the other. (2.) Becauſe more Brain is there contain'd. (3.) Becauſe in the Fore-part, there are ſeveral *Vaultings*, by which the Brain may be eaſily wounded. (4.) Becauſe of the thinneſs of the Skin in the Fore-part: And (5.) becauſe there are many and large Veins, which may cauſe a large Hemorrhage.

Q. *Why are Fractures in the* Temple-Bones *ſo dangerous?*

A. (1.) Becauſe theſe Bones are thin and weak. (2.) Becauſe there are Veins, Arteries, and Nerves. (3.) Becauſe the *Pericranium* doth clip the temporal Muſcle, and the Muſcle hath in the middle a *Tendon* of very *great Senſe.*

Q. *Why are Fractures on the* Sutures *dangerous?*

A. The Reaſon is already given, where we diſcourſed of Wounds of the Parts above the Scull.

CHAP. XXXIV.

Of the Section of the hairy Scalp, and opening the Scull.

Q. IN *what Parts of the Head may* Section *be ſafely made?*

A. In *all Parts*, except the *Sutures*, and on the *temporal Muſcles*; not on the *Sutures*, becauſe of the exquiſite Senſe of thoſe Filaments which tie the *Meninges* to the *Pericranium*, and paſs thro' the *Sutures*; and not on the *temporal Muſcles*, for Reaſons already given.

Q. *Of what Form is the Inciſion to be made?*

A. It is generally done in the Form of a St. *Andrew's Croſs*; but it is to be obſerved, that you be ſure to make no *tranſverſe Inciſion* a little above the Eye-lid, leſt the *frontal Muſcle* being *tranſverſely* divided, an incurable Palſy of the Eye-lid does enſue; wherefore in thoſe Places the Inciſion is to be made, either *ſtreight* or *oblique*, but not *tranſverſe*.

Q. *When Inciſion is made, what is to be done next?*

A. Begin from the Points of the Inciſion, and ſeparate the *Pericranium* from the *Cranium*, either with your Nails or *Spatula*, ſo far as that you can ſee the whole Fracture plainly; then to the Bone apply dry Lint, and fill up the Inciſion with Dorſels, arm'd with a *Reſtrictive*, to ſtay the bleeding, and keep the Lips aſunder; and over all a Boulſter: then roll it up, and open it not, till twenty four Hours are paſt, if you can help it.

Q. *Why is the Scull to be opened?*

A. (1.) That Pieces of the Weapon may be removed. (2.) That Pieces of the Scull, which are ſeparated from the whole, may be taken out. (3.) That the depreſſed Piece, which is thruſt down upon, and offends the *Meninges*, may be taken away, or reduced to its Place. (4.) For removal of *Quittor* and coagulated Blood.

Q. *How much of the Bone is to be taken away?*

A. Either all the fractur'd Bone, or part of it.

Q. *In what Caſes is all the fractur'd Bone to be taken away?*

A. (1.) If it be on the Crown, where no depending Vent can be given for diſcharge of Matter. (2.) All the *ſhivered Bones* are to be taken out in any place. (3.) So much is to be taken away, as covering the *Dura Mater*, becomes black.

Q. *What is to be conſider'd, when only part of the Bone is to be removed?*

A. That

A. That it be done on a depending Part, and that the *Trafine*, or *Trepan*, take in part of the ſound, and part of the fractur'd Bone.

Q. *Is there no Exception againſt this Rule, in opening it in a depending Part?*

A. Yes; for if the Brain appear, the *Dura* and *Pia Mater* being wounded, it muſt be ſhunn'd: becauſe the *Brain* being *fluid*, would be apt to fall down to the depending Part.

Q. *What are the chief Inſtruments with which you open the Scull?*

A. They are *Raſpatories*, *Levatories*, *Gimblets* called *Terebella*, and the *Trepan*, or *Trafine*.

Q. *What is to be obſerved in the uſe of* Raſpatories?

A. Set the Patient in a good Light, ſtop his Ears, and hold his Head ſteady, and cover the Brims of the Wound with Pieces of Linen Cloth; then firſt begin with the broadeſt, then the leſs broad, and laſt of all the narroweſt, being often moiſtened with Oil, or Vinegar and Water, if Blood appear; then dreſs it up as you do after the *Trepan*, of which we ſhall diſcourſe by and by.

Q. *In what Caſes are* Raſpatories *to be uſed?*

A. In Fiſſures, or Chinks, and in a *Sedes*, when the Print of the Weapon is narrow.

Q. *What is the* Gimblet *or* Terebellum, *and its uſe?*

A. It is ſuch an Inſtrument as Coopers uſe to raiſe up the Heads of Casks; its Point is made to ſcrew; its uſe is to raiſe up a depreſſed Piece of Scull, by firſt making a ſmall Hole with the Pin of the *Trepan*, and then ſcrewing in this Inſtrument, and raiſing up the Bone.

Q. *What is the Uſe of the* Levator?

A. To raiſe up a depreſs'd Bone, after trafining.

Q. *In what Parts muſt the* Trafine *not be applied?*

A. Not

A. Not wholly upon the *Fracture*, nor on a *Suture*, nor to the places a little above the *Eye-brows*, nor to the *Temples*, nor to the lower part of the Scull, (if the *Meninges* be wounded) nor laſtly, to the *Sinciput* of Children not above ſeven Years old.

Q. *What is to be obſerved in applying this Inſtrument?*

A. (1.) Take out the Pin when you are come to the *ſecond Table.* (2.) Take it often out, and moiſten it with Oil. (3.) Take care to cut all Parts equally, ſo as that you may not be through on one ſide, when you are not half through on the other. (4.) When it begins to ſhake, take it out with the Levator. (5.) If any Roughneſs remain, ſmooth it.

Q. *How is it then to be ordered?*

A. Firſt apply a Piece of Taffaty or Sarſnet, (with a Piece of fine Silk faſten'd to it, leſt it ſlip between the *Cranium* and *Dura Mater*, and ſo you loſe it) on the *Dura Mater*, dipt in *Mel. Roſar.* and *Ol. Roſar.* or *Mel. Roſ. & Spir. Vini*, or *Ol. Roſ. & Reſin*; to the Bone *dry Lint*, and to the Lips a *Digeſtive*; then roll the Head up, and lay the Patient in a *quiet Place* to reſt, free from Noiſe.

Q. *In how long time will the Bone ſcale?*

A. Some ſay in forty, others in fifty Days; but indeed, *no certain time* can be ſet for it.

Q. *Suppoſe a Depreſſion of the Scull, without a Wound*, in a Child, *without any ill Symptom?*

A. If the Blood *fluctuate* up and down under the Skin, then apply to the Part a ſoft double Linen-Cloth, moiſten'd in *Ol. Roſar. Alb. Ovi & Aceto*; which keep on twenty four Hours, but firſt remember to ſhave away the Hair: And after this, until the eleventh Day, apply a Cataplaſm, *ex Fol. Roſ. Rub. Bacc. Myrt. Farin. Hord. & Fabar. Fol. Abſinth. Sem. Cymini*, &c. *& coq. in Vin. Rub. &*

adde

adde Ol. Roſ. & Mel. Anglican. Apply this twice a Day warm; and from the eleventh to the twentieth Day, only apply *Diapalma*, ſoftened with *Ol. Lilior.*

Q. *But if a Fracture* in Cranio *happen to a Child with ill Symptoms?*

A. Then it is neceſſary that the Scull be opened; which being done, they are to be treated as Men are, only more tenderly.

CHAP. XXXV.

Of the Cure of Fractures of the Scull appearing in the wounded Part.

Q. *WHat is a* Simple Fracture *of the Scull?*

A. It is when there is no Wound, and when the Fracture is of *one only* kind.

Q. *How many ſorts of theſe* Simple Fractures *are there?*

A. Three; *viz.* (1.) *Rima*, or *Fiſſura*, a Chink, or Cleft. (2.) *Contuſio*, a Contuſion of the Scull. (3.) *Sedes*, when the Print of the wounding Inſtrument is left in the Scull.

Q. *Does a* Fiſſure *always paſs through both Tables of the Scull?*

A. No: ſometimes only through the firſt; and then it is to be ſo far *dilated*, to give a diſcharge to the *contuſed Blood*; but if through both Tables, the Dilation is to be accordingly.

Q. *But if you diſtruſt that there is a* Fiſſure, *yet if it is ſo ſmall that you cannot ſee it; how will you find it out?*

A. If upon the Patient's holding his Breath, and ſtretching out his Breaſt, a thin Humour, or *bloody*

bloody Sanies, do iſſue out, it is a certain Sign; or if you apply *Ink* to the Part *moſt ſuſpicious*, made thin with Vinegar to make it penetrate, and the next Dreſſing dry the Scull with a Sponge, and if you ſee any Print of the Ink to remain in the Scull, you may judge a *Fiſſure* to be there.

Q. *Are* Fiſſures *to have a* Trepan *apply'd upon them?*

A. No; unleſs it has been ſome time received, and bad Symptoms attend it; but otherwiſe it is to be dilated with *Raſpatories*, and cured as when the *Trafine* is applied.

Q. *How is a* Sedes *to be cured?*

A. If it paſs through *both Tables*, and no Splinters of Bone prick the *Meninges*, and the Weapon has made ſufficient way for the diſcharge of *Matter*, no further *Apertion* is to be made, but it is to be dreſſed as when the *Trepan* is applied; but if any Splinters of the Bone do offend, or the *Apertion* is too narrow, a further Opening muſt be made; and if it only paſs through the firſt Table, the Bone is to be *ſmoothed* by *Raſpatories*, and dreſſed with *Liniment. Arcæi*; and it often falls out, where the Patient is of a good Conſtitution, that the Bone does not ſcale at all, eſpecially if to the *Tinct. Myrrh.* ſome Drops of *Spir. C. C.* be added, and apply'd to the Bone.

Q. *How is a* Contuſion *of the Scull to be cured?*

A. The contuſed Part is to be taken away with *Raſpatories*, and then to be healed as in the latter Part of the Cure of a *Sedes* is directed.

Q. *What is a compound Fracture of the Scull?*

A. When to the Solution of Unity there is joined, either *Loſs of Subſtance*, or ſome part is removed from its own place.

Q. *How many ſorts are there of it?*

A. Three; (*viz.*) *Depreſſio*, a Depreſſion; *Concameratio*, a Vaulting; or *Exciſio*, a part of the Scull *wholly* cut off.

Q. *If in a Depreſſion, one part of the Bone cleave to the whole, and the other not, what muſt be done?*

A. Apply the *Trepan* as near to the fractured part as you can, and then reduce the depreſſed Bone to its place; or elſe remove it, as you ſee moſt neceſſary, taking great Care not to hurt the *Meninges.*

Q. *What is* Concameratio, *or Vaulting?*

A. It is when the Scull, being pierced with a ſharp-pointed Weapon, and with Violence pulled up again, it ſometimes heaves up one Table, and ſometimes both, and leaves a Hollowneſs or *Vault* underneath.

Q. *How is it to be cured?*

A. If it only paſs thro' the firſt Table, ſmooth it, and proceed, as has been directed; but if it paſs thro' both Tables, apply the *Trafine* on the moſt depending Part, and proceed as before directed.

Q. *How is* Exciſio *to be cured?*

A. If the Piece cut away, cleave to the *Cutis Muſculoſa*, and the Wound go no deeper than the firſt Table, the Piece is to be ſeparated from the Fleſh, then the Bone to be raſped, and cured as a *Sedes:* But if both Tables be cut off, and ſtick to the *Cutis Muſculoſa*, firſt waſh the Wound with *Spir. Vin.* and reduce the Pieces to their place, and ſtitch the Wound exactly.

Q. *What is a* Diſſolution *of a* Suture?

A. It is, when thoſe Parts of the *Cranium*, which are united by the *Suture* gape, and are ſeparated by ſome violent Blow or Fall.

Q. *What is a* Colliſion *of a* Suture?

A. It

A. It is a Contusion of its Brims, (as I told you before) and of the *Ligament* which passed thro' it, from the *Meninges* to the *Pericranium*, which causeth fearful Symptoms, and which sometimes obligeth us to apply the *Trafine* on one side the *Suture*, &c.

Q. *Suppose a Fracture under the* Temporal Muscle?

A. If it be with a *Puncture*, or transverse Wound, it is *very dangerous*; but if it be *long-ways*, it is to be dilated by Dorsels of Sponge; and if there be a *Fissure*, by *Raspatories*: but if there be a great Fracture or Depression, then make a *triangular* Incision a little above the Fracture, shunning the *temporal Muscle*, and the *Trepan* is to be applied, and the Shivers of Bone to be taken away, and the rest reduced to their place; then dress as before directed.

Q. *But how must the* Sanies *be expell'd out of the Wound?*

A. At every Dressing cause the Patient to bend down his Head, and to stop his Mouth and Nose, and breathe strongly, to expel it from the Wound; then inject some *mundifying Decoction*, to wash out all Filth, and dress up *secundum artem.*

Q. *I have heard it* confidently *reported, and by some Men affirm'd* vehemently, *that have had* Fractures *in Cranio, that the Surgeon who cured them, put in a Piece of Gold, where the Bone came out, and healed the Wound over it: Pray how can this be?*

A. The Patient that believed so, was a Fool; and that Surgeon that pretended to do so, was a Knave; and put the Piece of Gold in his Pocket, and not in the Patient's Scull: The thing is impossible, and more fit for the Creed of an old Woman, than a Surgeon. Not but I believe such a thing has been often *pretended*; and most Coun-

try

try People really think ſo; but it is all a Trick, and Piece of Deceit, unbecoming an honeſt Surgeon: the Wound not being capable of healing with any extraneous Body in it; for if it was, nothing ſeems ſo fit, as the Piece of Scull that was taken out by the Trafine; but it is all *a Bite.*

CHAP. XXXVI.

Of a Contra-Fiſſura.

Q. *WHat is a* Contra-Fiſſura?

A. It is when the *Cranium* is ſtricken upon *one Part*, and fractur'd in *another*; and this either in the ſelf-ſame Bone, or in divers Bones, as when the right *Bregma* is ſtruck, and the left by the ſame Blow is *cleft*; and ſometimes when the Blow is upon the *upper Table* that remains whole, and the *lower Table* is *fiſſured.*

Q. *What is the Reaſon of this?*

A. This happens to thoſe whoſe *Sutures* are very obſcure and cloſe, in whom, when the Air which is within the Scull, is ſtrongly moved by a Blow, and on every ſide is driven by the Force of it, it is entirely carried through the Subſtance of the Brain to the oppoſite Part, which when it meets with the Scull, which by reaſon of its firmneſs cannot yield, gives way to a Fracture; as a Glaſs, which ſometimes being knocked on one ſide, is crack'd on the other by the ſame Blow.

Q. *How is this kind of Fracture to be found out?*

A. If no *Fiſſure* appear in the Wound, and yet there are the Symptoms of a Fracture, then you have reaſon to take a View of the oppoſite Part; or if you find a Tumor in the oppoſite Part, or that

that the Patient often puts his Hand to it, you may ſuſpect a Fracture or Fiſſure there: But if no Tumor appears to guide you, ſhave the Head, and apply to the oppoſite Part this Emplaiſter, ℞ *Pic. Naval. & Cer. ana* ℥iij. *Terebinth.* ℥j. *Maſtich. & Irid. pulv. ana* ℥ij. *f. Empl.* Spread it upon Leather and apply it, and let it lie twenty four Hours; and if when you take it away, any part of the Skin appears *more moiſt* than the reſt, you may ſuſpect that the Hurt is there.

Q. *Suppoſe the ſecond Table to be fractur'd, the firſt remaining whole?*

A. Then the *Trepan* is to be applied, to make way for coagulated Blood.

Q. *When the* Contra-Fiſſura *is found, what is to be done?*

A. Dilate the Chink with *Raſpatories*, and proceed as before directed.

Q. *Suppoſe a* Contuſion *on the Head without a Wound?*

A. The Symptoms will inform you, if there be a Fracture; which if there be, you muſt make Inciſion to come at it; but if there be not, ſhave off the Hair, and apply a Cataplaſm, *ex Far. Hord. Acet. Vin. Rub. pulv. Roſ. Rub. Bacc. Myrtill. Maſtic. Ol. Roſ.* &c. Then open a Vein, and the next Morning give a gentle Cathartick; alſo drop into the Ears, and moiſten the Paſſages of the Noſe with *Ol. Amygd. Dulc.* About the ſeventh Day apply *Empl. de Betonica*, malaxed with *Ol. Roſ.* And now, if fearful Symptoms begin to appear, let Inciſion be no longer delay'd.

Q. *How will you judge the* Dura Mater *to be hurt, when you have no Wound, nor apparent Fracture?*

A. When there is a Bleeding at the Ears, a Stupidity, and a pricking Pain in the Part when the Patient blows his Noſe, *&c.*

CHAP.

CHAP. XXXVII.

Of Wounds in the Meninges and Brain.

Q. *HOW many Inconveniences may happen to the* Dura Mater?

A. Five: (*viz.*) A Wound, Pain, Inflammation, Apoſtemation, and Diſcolouration.

Q. *Suppoſe an immoderate Flux of Blood happen in a Wound there?*

A. If the Weapon has not made way enough to come to it, it muſt be made; and apply *Pulv. Galeni*, to reſtrain the Flux.

Q. *How is Pain to be aſſuaged here?*

A. Uſe no *Narcotick*, nor common unctuous mollifying Medicines, but apply *Ol. Roſar. & Mel. Roſar.* artificially mixed.

Q. *Do theſe ſort of Wounds admit of Stitching?*

A. No; they are to be cured by Incarnation.

Q. *Suppoſe an Inflammation happen in a Wound on the* Dura Mater?

A. Bleed, and uſe a ſlender Diet, then foment with a Decoction *ex Althea, Sem. Lin. & Fœnugrec. Fol. Violar.* &c. and apply *Ol. Roſar.* and if occaſion be, dilate the Scull.

Q. *How is it to be known if* Quittor *be contained in an Apoſtemation there?*

A. By the extraordinary Whiteneſs of ſome part of it.

Q. *How is it to be opened?*

A. Very warily, for fear of offending the Brain; then apply *Syr. è Roſ. ſicc.* or *Mel. Roſar.*

Q. *From whence does* Diſcolouration *of that part proceed?*

A. From the *Violence* of the *Blow*; from *coagulated Blood*; from the *Coldneſs* of the *Air*; by Application of improper Medicines, and from *Putrefaction.*

Q. *Suppoſe it proceed from the Violence of the Blow?*

A. Then apply *Ol. & Mel Roſar.* or *Ol. Ovor. cum Spir. Vin. & Pulv. Croc. q. ſ.*

Q. *But what if it proceed from coagulated Blood?*

A. Then dreſs it with a Compoſition *ex Spir. Vin. Mel. Croc. Sarcocol.* &c. boiled to blackneſs.

Q. *Suppoſe bad Applications have been the Cauſe?*

A. Then Medicines of a contrary Quality are to be applied.

Q. *How will you know if Blackneſs proceeds from Putrefaction?*

A. By the ſtrong Smell of the *Sanies.*

Q. *What is then to be uſed?*

A. Such as theſe artificially compounded and mixt, *Spir. Vin. Syr. Abſinth. Mel. Roſ. Ægyptiac. Sarcocol. Myrrh. Aloes, Vin. alb.* &c.

Q. *What are mortal Signs in this Caſe?*

A. If the Tumor and Putrefraction increaſes, notwithſtanding all that can be done; if the Eyes bunch out, the Patient is reſtleſs and raving, you may believe that Death is at hand.

Q. *How is Bleeding, and alſo Wounds to be cured in the* Pia Mater?

A. As thoſe of the *Dura Mater.*

Q. *How many Griefs may happen to the Brain?*

A. A Wound, Apoſtemation, Putrefaction, Sideration, Concuſſion, Fungus and Tumor, by reaſon of Flatuoſity.

Q. *What are the Signs of a wounded Brain?*

A. A Fever, Vomiting of Choler, Loſs of Speech, Slumbering, Stupidity, Dimneſs of Sight, Giddineſs, Foaming, Convulſion; or if the Meninges are both divided, and a Subſtance like Fat comes out,

out, which will neither ſwim above the Water, nor melt with the Fire, but is thick, round, and of a marrowy Subſtance; it is a part of the Brain.

Q. *Are ſuch Wounds curable or not?*

A. Some pretend that they have been *ſo happy* as to effect a Cure; *and ſince it has been done*, we are to do our beſt Endeavours, and leave the Succeſs to God: but at the beſt they are very dangerous.

Q. *Why?*

A. (1.) By reaſon of the Nobleneſs of the Part, and the neceſſary Uſes of the Functions of it. (2.) By reaſon of the Motion of the Brain. (3.) The Moiſtneſs. (4.) The Coldneſs. (5.) The Conſent of the Nerves which ſpring from thence. And (6.) Becauſe Medicines do not eaſily paſs to the wounded Brain.

Q. *How are Wounds of the Brain to be cured, if curable?*

A. Firſt foment with a Decoction *ex Hyperic. Betonic. Calamint. Chamæm. Aneth. Euphrag.* &c. and then (till the ſeventh Day) uſe *Ol. Tereb. & Ol. Roſ.*

Q. *Suppoſe it be of a livid Colour?*

A. Then dreſs it with *Spir. Vin. Ol. Roſ. & Mel. Roſar.* &c.

Q. *Suppoſe it yields a laudable Matter?*

A. Then uſe only *Syr. Roſ. ſicc. cum Aq. Vitæ*, or *Spir. Vini.*

Q. *What Symptoms remain commonly after Wounds of the Brain are cured?*

A. Faltering of Speech, and Palſy of the Arms.

Q. *How is a Putrefaction and Sideration to be diſcerned or remedied?*

A. They are not to be diſcovered but by opening the Scull, and that moſt commonly when the Patient is dead.

Q. *What think you of a* Concuſſion, *or violent Commotion of the Brain?*

A. It is to be dreſſed as a Fracture of the Scull without a Wound, open a Vein, and inject ſharp Glifters; but beware of applying aſtringent Medicines, becauſe they keep in the *fuliginous Vapours.* Sometimes a *Concuſſion* is attended with the Symptoms of a Fracture, or Fiſſure; and ſometimes it brings Death, if not managed with the utmoſt Skill and Care; and ſometimes even that is all too little to ſave Life.

Q. *What will you do if a* Fungus *ariſes?*

A. Apply Medicines which ſtrongly dry, and mildly fret, as *Pulv. Sabin. Hermodact. uſt. Pulv. Turpeth.* &c. But nothing ſo effectual and ſafe, as a Powder made of common brown Oker two parts, and Powder of Savine one part, mixt and ſtrewed on; it is *a Nonſuch,* in this caſe. If it grow up very large above the *Cranium,* then bind it with a Ligature to procure its fall; but beware of uſing *Catheretical* Means.

Q. *How is a* Giddineſs *cauſed in Wounds of the Brain?*

A. It is cauſed from the Circulation and Circumvolution of the Animal Spirits.

Q. *How comes Dimneſs of the Sight and Slumbering?*

A. From Diſſipation of the Animal Spirits.

Q. *How is Vomiting cauſed here?*

A. The Brain being troubled, the Affection is communicated by the Nerves of the *ſixth Conjugation,* which proceeding from the Brain, are diſperſed through the whole Body of the Stomach, which is drawn inward, purſued and turn'd upwards, from whence thoſe things which are contained in the Capacity of it, are rejected by vomiting; and *Choler* being moſt *light,* is firſt vomited up.

Q. *From whence proceeds a* Torpor *or Stupidity?*

A. From

A. From ill Vapours which assault the Brain, and dissipate the *Animal Spirits.*

Q. *From whence comes Convulsion?*

A. From corrupt Vapours, which nip the *beginning of the Nerves.*

Q. *What is to be done in such a Case?*

A. Anoint the Neck and *Spinalis Medulla* with a Composition *ex Fol. Rut. Marub. Rorismar. Ebuli, Salviæ, Paralys. Bacc. Lauri, Flor. Cham. Melilot. Hyper. macer. in Vin. alb. Dein coq. cum Ol. Lumbricor. Terebinth. Axung. Anseris & Human.* &c. *ad Consumpt. Vini*; *tum, Colat. & adde Tereb. Ven. Aq. Vitæ & Cera,* &c.

CHAP. XXXVIII.

Of Wounds happening to the Instruments of the Senses.

Q. *WHY are Wounds of the* Eye *difficult of Cure?*

A. (1.) Because of the Excellency of the Part itself. (2.) Because of its exquisite Sense. (3.) Because of the Consent it hath with the Brain. (4.) Because of the great Flux of Humours falling upon a wounded Eye. (5.) Because of the continued Motion of the Arteries.

Q. *What are the Differences of Wounds of the Eye?*

A. They are either superficial, which pass not through the *Cornea*; or deep, which do penetrate through it.

Q. *What are we principally to observe in the Cure of these Wounds?*

A. (1.) That we use no oily nor fat things. (2.) That when one Eye is wounded, we roll up

both. (3.) That the Head lie high, bending forwards; and the Reaſons are: (1.) All oily things inflame the Eye, and cauſe Pain: And (2.) We roll both Eyes up, becauſe Light, at ſuch a time, is prejudicial to the Eye; and if only one Eye be rolled up, and the other expoſed, that which is ſo expoſed moves, and by its Motion cauſes the wounded Eye to move alſo; which retards the Cure.

Q. *How is Pain to be aſſuaged in ſuperficial Wounds of the Eye?*

A. Things of modern uſe are, *Aq. Sperm. Ranar. Roſar. Plantag. Portulac. Pluvial. Mucilag. Sem. Pſillii, Tragacanth. Papav. Hyoſciam. Decoct. Nuc. Cupreſſ. Balauſt. Lac Muliebr. Sang. Turturum & Pullorum, Columb.* &c.

Q. *How are theſe to be applied?*

A. Unleſs Matter abound, it will be ſufficient (the Eye being ſhut) to apply them above the Eye-lid; and then to the Forehead apply *Pulp. Pomor. ſub Ciner. coct. Caſſ. Mucilag. Sem. Pſillii, Cydonior. Far. Hordei. Cribrat. Bol. Arm.* &c.

Q. *Suppoſe the Eye-lid and the* Tunica Conjunctiva *both wounded?*

A. Then great Care is to be taken, that they do not grow together; which may be done by applying *Fol. Auri* between them.

Q. *How is it to be dreſſed if the* Aqueous Humour *comes out?*

A. If it all comes out, the Sight will be loſt; but if only Part, not ſo; eſpecially in Children: and this is cured as a ſuperficial Wound.

Q. *But, what think you if the* Cryſtalline *and* Vitreous *Humours come out?*

A. Then the Sight is of neceſſity loſt.

Q. *How is ſuch an Eye to be dreſſed?*

A. With

A. With *Lap. Tutiæ, & Calaminar. Præparat. Ter. Sigillat. Sang. Dracon. Sarcocol.* &c. very finely ſearced.

Q. *How will you dreſs the Wounds of the Ear?*

A. If it be wholly cut off, dreſs it throughout as other Wounds; if it be only divided, and that but in part, the dry Stitch may ſerve: but if it be large, a Needle and Silk muſt be uſed, taking care to paſs it through the Skin [only] and not the Ear, for fear of an *Inflammation*, *Pain* and *Mortification*, and then uſe ſtrong Deſiccatives; and if it reach to the *Meatus Auditorius*, you muſt keep the Ear ſtopt with a Sponge-Tent, to prevent a *Fungus* and *Matter* falling in, which might corrupt the *Tympanum* or *Drum*, and cauſe Deafneſs.

Q. *How are Wounds of the Noſe to be ordered?*

A. If the Wound be ſimple, what I but now laid down concerning Wounds of the Ear, may be ſufficient; but if there be a Fracture, it is to be reduced, and Quills or Pipes kept in the Noſtrils, with good Boulſters and Bandage.

Q. *How would you dreſs the Tongue, was it wounded?*

A. If it is wholly cut off, it is not to be reſtored; but if it be not cut quite off, although it hangs but by a fleſhy Thread, you muſt try to ſtitch it, and that deep too, that it do not break out again; then cut off the Thread, and uſe Lotions *ex Aq. Plantag. Syr. Myrtil. Roſ. ſicc. Alum. Roch. Alb. Ovi*, &c. and let him hold *Sacch. Roſ.* in his Mouth, and let his Diet be of Jellies and liquid things.

CHAP. XXXIX.

Of Wounds of the Veſſels of the Throat.

Q. *WHat think you of the* internal Jugular Vein *and* Soporal Arteries *being wounded?*

A. Theſe commonly bring Death.

Q. *Why?*

A. (1.) Becauſe no good Ligature can be made on theſe Parts to ſtop the Bleeding, for fear of choaking the Patient. (2.) Becauſe they immediately deprive a Man of *Vital Spirit* by the great Flux of Blood.

Q. *How then muſt we attempt to ſtop the Bleeding?*

A. By fit Medicaments, and by Deligation.

Q. *What are your Medicaments?*

A. Either *Reſtrictive* or *Eſcharotical:* The *Reſtrictive* are theſe, *Aloes, Sang. Drac. Far. Volat. Hypociſt. Maſtich. Sarcocol.* &c. The *Eſcharotical* are either ſuch as procure a *Cruſt*, or elſe the *actual Cautery*; thoſe which procure a *Cruſt*, are made of ſome of the foregoing Powders mixed with *Calx Viv. Calcanth. Arſenic. Sublimat. Auripigment*, &c. mixt with *Alb. Ovi*, and applied on Tents and Dorſels, and held hard on, continually by ſome *Stander-by*, and not to be removed in leſs than three Days; and then if the lowermoſt ſtick faſt, let it alone till it digeſts off of its own accord, for fear of a freſh Flux of Blood.

Q. *But upon Suppoſition that theſe Methods prove fruitleſs, and we are forced to bind the Ends of the Veſſels, how is that to be done?*

A. Raiſe up the Veſſels from the Parts to which they adhere, with a ſmall Hook of Silver; then you

you are to bind them *above and below the Wound* ſtrongly, and cut them aſunder between the Deligations; then digeſt, incarn, *&c. S. A.* Uſing all the time a ſlender, cooling, *glutinous Diet*; keep the Body ſoluble, and rightly order the Non-naturals, *&c.*

Q. *Suppoſe one of the* recurrent Nerves *are cut aſunder?*

A. Then uſe Balſams made *ex Ol. Hyperic. Liniment. Arcæi, Balſ. Tereb. Bol. Arm. Aloes, Myrrh. Maſtich.* &c. which will conſolidate according to your Deſire.

Q. *What Accidents follow upon the* recurrent Nerves *being cut?*

A. If but one be cut aſunder, the Voice becomes hoarſe; but if both be divided, the Speech is quite taken away.

Q. *Why are they called* recurrent Nerves?

A. Becauſe they come down from the *ſixth Pair* of Nerves, and return upwards towards the Muſcles of the *Larynx*, uſing in the left Part, the Trunk of the *Aorta*, and on the right the *Axillar Arteries*, as Pulleys.

CHAP. XL.

Of Wounds of the Neck.

Q. *WHat Symptoms attend the* Aſpera Arteria, *or Wind-pipe, being wounded?*

A. (1.) The Breath comes out at the Wound. (2.) Blood comes out at the Mouth. (3.) The Speech is hindered. (4.) A Cough troubles the Patient.

Q. *Are Wounds of the Wind-pipe mortal?*

A. Tho' they are not ſo of themſelves, yet by Accident they may become ſo.

Q. *Why?*

A. (1.) By reaſon of their fearful Symptoms, being ſo near the Jugular Veins, and *Soporal Arteries*, which are generally wounded with it; it hath alſo many Branches of the *recurrent Nerves*, and ſundry Muſcles. (2.) Becauſe Medicines cannot be kept on. (3.) Blood may fall from the *Jugular Veins* upon the *Lungs*, and *ſuffocate* the Patient.

Q. *How are they to be cured?*

A. If they be *tranſverſe*, the wounded Patient muſt bend down his Head; but if *ſtreight*, he is to hold up his Head, that the Brims may be brought cloſe together; then treat it with Needles or Pins, as in a Hair-Lip, becauſe Silk or Thread will rot; then apply *Liniment. Arcæi*, and over all *Diapalma* malaxed *cum Ol. Myrtill.* &c. and take care that neither Blood nor Quittor fall upon the *Wind-pipe*, leſt it choak the Patient: and if it be already lodged there, vent muſt be given to it in the depending Part, and a ſmall Silver Pipe put in, and there kept till the fearful Symptoms are all over.

Q. *Are*

Q. *Are no internal Means to be uſed?*

A. Yes; make *Gargariſms ex Hord. perlat. Flor. Roſ. Rub. Balauſt. Jujub. Uvar. Paſſ. Glycyrrhiz. Syr. Myrtin.* &c. tho' I cannot ſee, that they can be of much uſe.

Q. *What are the Signs of the* Oeſophagus *or Gullet being wounded?*

A. (1.) The Meat and Drink will come out at the Wound. (2.) There will be difficulty of Swallowing. (3.) Hiccough and Vomiting. (4.) Fainting and cold Sweats, with Coldneſs of the Hands and Feet.

Q. *What are the Prognoſticks in theſe Wounds?*

A. (1.) All theſe Wounds are of difficult Cure. 1. Becauſe they bring difficulty of Breathing. 2. Becauſe they can hardly be inflicted unleſs the *Aſpera Arteria*, *Jugular Veins*, *Soporal Arteries*, and *recurrent Nerves*, or ſome of them, be wounded alſo. (2.) The ſmaller the Wound, and the further from the Mouth of the Stomach, the leſs dangerous, *& è contra.* (3.) If it be wholly divided, the Cure is impoſſible, becauſe one part flies upwards, and the other contracts downwards.

Q. *How are theſe Wounds to be cured?*

A. The firſt Intention is Stitching, taking care to leave an Orifice in the depending Part, for diſcharge of Matter, *&c.* then cure it as Wounds of the Windpipe.

Q. *What Diet is to be uſed?*

A. All his Food muſt be liquid, and ſuch as will nouriſh very much, (*viz.*) New Milk, Almond Milk, with *Sacch. Roſat.* diſſolved in it; Chicken-Broths, Emulſions, *&c.*

Q. *But ſuppoſe the Patient cannot ſwallow at all?*

A. Then nouriſhing Gliſters are to be adminiſtred; but firſt give a purging one, to drive the Excrements out of the Guts: and remember that

in

in the nouriſhing Gliſters, you give no Oil, Salt, nor Sugar, becauſe thereby too ſpeedy Expulſion will be cauſed.

CHAP. XLI.

Of Wounds of the Breaſt.

Q. *What are the Signs of the Lungs being wounded?*

A. The Blood which comes forth is yellowiſh and frothy, there is a Cough, and difficulty of Breathing, with a Pain on that ſide, tho' the Patient is moſt at eaſe when he lies on it.

Q. *What are the Prognoſticks?*

A. If the *Vena Arterioſa* be wounded, they are deadly; and if the Party live, in Wounds of the Lungs, they commonly leave a *Fiſtula.*

Q. *What are the Signs of a wounded* Diaphragma?

A. There is a heavineſs on that Part, a Raving, Aſthma, Cough, Pain, and Fever.

Q. *What are the Prognoſticks?*

A. Wounds on the fleſhy Part of the *Diaphragma* are dangerous; and if in the *Nervous Parts*, certain Death enſues: becauſe in the firſt caſe we cannot come to dreſs them, and they are in continual Motion; and becauſe the Parts within the Breaſt are eaſily inflam'd; and in the laſt caſe, by reaſon of Inflammation, a *Delirium*, and ſometimes a Convulſion follows.

Q. *Why are Wounds of this Part ſo dangerous?*

A. (1.) Becauſe it is Membranous, and in continual Motion. (2.) It is nervous, and therefore painful. (3.) Becauſe the *Pericardium* is tied to it.

it. (4.) In Wounds of it, the Brain ſuffers by reaſon of the Nerves, which are inſerted in it; the Heart, by reaſon of its nearneſs, and the *Arteriæ Phrenicæ*; the Liver by reaſon of its Conjunction with the *Venæ Phrenicæ*. (5.) In Wounds of it, Breathing is hindered. (6.) Becauſe Blood iſſues into the Cavity of the Breaſt. (7.) Pain of the *Spine* reaching to the Shoulder, attended with Cough, Fever, and Raving, *&c.*

Q. *Suppoſe the Heart to be wounded?*

A. If the Subſtance of it be wounded, it is to be reckoned deadly.

Q. *Why?*

A. Becauſe, (1.) It is the beginning of Life. (2.) It is the Laboratory of the vital Spirits. (3.) It is the Shop of the vital Blood. (4.) It is in continual Motion. (5.) It is an hot Entrail, and ſubject to Inflammation. (6.) Its Subſtance is *compact* and *dry*. (7.) Blood iſſues out from it into the Cavity of the Breaſt, which ſtifles the Patient.

Q. *How will you know that ſome great Veſſel in the Breaſt is wounded?*

A. By theſe Signs: (1.) Difficulty of Breathing. (2.) The Fever increaſing. (3.) There will be vomiting of Blood. (4.) After the Blood putrifying, the Breath will ſtink. (5.) A depraved Appetite, a Deſire to Vomit, coveting to lie down, and often Fainting, *&c.*

Q. *Why are Wounds of the Breaſt in general ſo dangerous?*

A. (1.) Becauſe of the great Flux of Blood, which cannot be ſtaid, becauſe theſe Wounds lie deep, and ſo will neither admit of Rolling nor proper Applications. (2.) Becauſe the Coats of the Veins and Arteries are Membranous, and cannot be cured by the firſt Intention. (3.) Becauſe the diſcharge of Matter is both difficult and dange-

dangerous. (4.) Becauſe the Blood falling into the Cavity of the Breaſt, preſſes down the Diaphragma, cauſes difficulty of Breathing, and being converted to Quittor, acquires a malignant Nature, and ſo may cauſe a Convulſion, Raving, and in time, an *Empyema*, *Pthiſis*, and hectick Fever, if not Death.

Q. *What is the Method of Cure in penetrating Wounds of the Breaſt?*

A. (1.) Lay the Party in his Bed, with the Orifice of his Wound downwards, and let him endeavour by Coughing, and holding his Breath, to diſcharge the Blood fallen into the Cavity of the Breaſt; which being done, dip a *Flamula* in *Alb. Ovi*, and put it into the Wound, letting the greateſt part hang without it; or inſtead of a *Flamula*, a ſilver or leaden Pipe may be uſed, dipt in warm *Liniment. Arcæi*, and a *Diapalma* Plaiſter over all, with good Boulſters and Rolling, which muſt be continued till the Wound diſcharges but a ſmall Quantity of Matter.

Q. *What is the longeſt time required for ordinary penetrating Wounds here?*

A. About Forty Days.

Q. *Is the Blood and Quittor to be diſcharged no way but by the Wound?*

A. Yes, both by coughing it up, and by Urine.

Q. *How is it carried from the Cavity of the Breaſt to the Mouth?*

A. (1.) It is carried into the *Pleura*, then into the Subſtance of the Lungs; thence to the *Aſpera Arteria*, and ſo to the Mouth.

Q. *How is it ſent out by Urine?*

A. It paſſes firſt into the Subſtance of the *Pleura*, then into the *Vena ſine pari*, near the *Diaphragma*, where a Branch of it paſſes directly to the *Emulgents*, and ſo to the Kidneys and Bladder.

Q. *Pro-*

Q. *Proceed to the reſt of the Cure?*

A. The Patient dreſt, as before directed, if there be Occaſion, bleed him, and give him ſome *vulnerary Potion*, wherein is *Pulv. Rhab. Mummiæ, Ter. Sigillat*, &c. and after this, daily a Decoction *ex Sem. Quatuor frigid. Maj. Rad. Fœnicul. Petroſelin.* &c. or a *Decoct. Pect. cum Syr. è Quinq. Radicibus, Roſ. Simpl.* &c. taking ℥vj. every four Hours; or if Matter offer it ſelf to be purged by Expectoration, then give *Aq. Font. cum Aceto* warm; and if he coughs with difficulty, give *Syr. Tuſſilag. aut Glycyrrhiz. cum Syr. Acetoſ.*

Q. *May no Injections be uſed?*

A. Yes, *as the Caſe may ſtand*; but beware, (1.) That no bitter thing be put into them; and, (2.) That care be taken that all the Injection come out again: and then upon the *Flamula* or Pipe, lay a Sponge wet in *S. V.* for the firſt four or five Days, to keep out the Air, and extract the Matter by a gentle heat. (3.) Uſe no Pledgets of Lint, leſt by Inſpiration they be pulled into the Cavity of the Breaſt, and cauſe Putrefaction.

Q. *How often are* penetrating Wounds *of the* Breaſt *to be dreſſed?*

A. According to the ſmall or great Quantity of the Matter, once or twice a Day.

Q. *When is it time to ſuffer the Wound to cloſe?*

A. When the Patient breathes freely, finds but little Pain, and no Weight towards the Diaphragma, and the Quittor laudable, and but little in quantity.

CHAP.

CHAP. XLII.

Of penetrating Wounds of the Abdomen, without any Hurt of the Parts contained.

Q. *HOW will you be certain if a Wound of the* Abdomen *penetrates, or not?*

A. If the *Omentum*, or one of the *Inteſtines* ſtart out, or if you inject warm Wine, and it does not return, or if the Probe goes deep ſtraightways, you may judge it penetrates.

Q. *What are the Preſages in ſuch a Wound?*

A. A Wound of the *Abdomen not penetrating*, is without danger, unleſs it be extraordinary large. (2.) A Wound on the middle Part is more dangerous than one on the ſides. (3.) All penetrating Wounds are dangerous. (4.) If any of the contained *remarkable* Parts are wounded, it commonly proves deadly.

Q. *Why are all penetrating Wounds there dangerous?*

A. (1.) Becauſe they are moſtly large, and always deep. (2.) Becauſe the Air hurts the Inteſtines. And, (3.) becauſe the *Quittor* falls into the Cavity.

Q. *How are we to proceed in the Cure?*

A. If any Part ſtart out, it is to be reſtored either by your Hand; or if it has long hung out, and is tumified, it is to be done by a Fomentation *ex Flor. Cham. Melilot. Anethi, Pulegii, Tanaſet. Lavendul. Abſinth. Bacc. Lauri, Sem. Cymini, Aniſi*, &c. decocted in *Vin. Rub. vel Lacte:* and if after reaſonable Fomentation you cannot reſtore it, the Wound is to be enlarged, to make way for it.

Q. *If*

Q. *If by reaſon of long continuing in the cold Air, the* Omentum *be cooled, hardned or livid, what muſt be done with it?*

A. Then tye it near to the ſound Part, and cut the corrupt Part away, letting the Thread hang out, till the corrupt Part ſeparates from the whole.

Q. *Why muſt Ligature be made in this Caſe?*

A. Becauſe otherwiſe much Blood would fall into the Cavity of the *Abdomen.*

Q. *The* Omentum *being reſtored, how are theſe Wounds to be ſtitched?*

A. Having a clear Light, and a good Aſſiſtant to hold up the Parts, you muſt lay the Patient on the ſide oppoſite to the Wound, that the Guts be not in your way; then take a good Needle fit for the Purpoſe, well armed with a good waxed Thread; and then, firſt, the Needle is to be thruſt thro' the Skin and the Muſcles, even to the *Peritonæum*, not touching it on that ſide; then from within outwards the Needle is to be thruſt thro' both the *Peritonæum* and Muſcles of the oppoſite ſide; then at an Inch diſtance, the Needle is to be paſſed thro' the Muſcles of the ſame ſide, leaving the *Peritonæum*, and afterwards from within outwards, it is to be paſſed thro' the *Peritonæum* and Muſcles, and ſo proceed, ſometimes piercing the *Peritonæum*, and ſometimes forbearing it, till you have ſufficiently ſtitched the Wound, which ought to be ſtrengthened by the *dry Stitch*, becauſe in a few days the Thread will cut the Brims aſunder.

Q. *What Topick will you then apply?*

A. All *vulnerary Balſams*, and agglutinative Emplaiſters, are proper; as *Balſ. Lucatel. Linim. Arcæi, Ol. Hyperic. cum Gum. Ol. Tereb. Sarcocol. Maſtich.* &c. mixed; and over all, *Empl. Paracelſ. & ad Hern.* mixed; and to prevent Pain, embrocate all the Parts about with *Ol. Roſar. But*

remember to leave an Opening in the depending Part, for the discharge of Matter, which otherwise would collect, and cause sad Accidents.

CHAP. XLIII.

Of Wounds of the Parts appointed for Chylification.

Q. *What are the Signs of the Stomach wounded?*

A. The Wound is under the *Cartilago Ensiformis*, from whence *Chyle* comes forth; also there is Hiccough, vomiting of Choler, and whatever is taken in by the Mouth; the Pulse grows weak, thin Sweats, and the Extremities of the Body grow cold, *&c.*

Q. *What are the Prognosticks?*

A. If they are superficial, they are of easy Cure; but if they are penetrating, and towards the bottom of the Stomach, they are deadly.

Q. *What do you mean by that word* deadly?

A. (1.) In a strict Sense, that which brings *inevitable Death.* (2.) In a more lax Sense, that which *most commonly* brings Death.

Q. *Why are they so dangerous?*

A. (1.) Because it is of a Membranous Substance. (2.) The Brims of the Wound cannot be kept together by Ligature. (3.) Vulnerary Potions slip out of it. (4.) Meat and Drink keep asunder the Brims. And, (5.) it is a very sensible Part.

Q. *How are Wounds of the Stomach to be cured, if at all curable?*

A. The Tent must not enter the Stomach; only it is to keep open the Parts lying above it; let it be armed with *Tereb. Ven. lot. cum Vitel. Ovi*, &c. and

and outwardly embrocate with *Ol. Roſar. & Myrtil.* and give him inwardly *Syr. Cydonior. vel Granat. in Aq. Plantag.* or *Vinc. per Vinc.* and let him eat and drink very ſparingly.

Q. *What are the Signs of the ſmall Guts being wounded?*

A. The *Chyle* comes out at the Wound, the Flanks ſwell, the Patient vomits Choler, and has the Hiccough, with great Gripings in the Belly.

Q. *Which are moſt dangerous being wounded? and why?*

A. Wounds of the ſmall ones are moſt dangerous; becauſe they are more nervous, and of a more exquiſite Senſe, are nearer to the Stomach, and have more *Meſeraical Veins*, beſides they diſtribute the *Chyle*, and more refine it, and their Subſtance is more thin, and not ſo readily admit of Agglutination as the great Guts do.

Q. *What are the Preſages in theſe Wounds?*

A. Thoſe of the ſmall Guts prove *moſt commonly* mortal; and amongſt theſe, Wounds of the *Jejunum* are the worſt.

Q. *How are theſe Wounds to be cured, if curable?*

A. If the Gut be not got without the Wound, it muſt be gently drawn out, and ſtitched with the Glover's Stitch, with Thread not waxed; then foment it with warm Red Wine, and reduce it to its place, ſtrowing over it *Pulv. Sarcocol. Myrrh.* &c. and then the external Wound is to be ſtitched and dreſſed as has been taught in the Chapter of penetrating Wounds of the *Abdomen.* Then leſt the Excrements ſhould *harden*, feed the Patient with moiſtening Meats; and as you ſee occaſion, give him *emollient Gliſters:* But here is no neceſſity for vulnerary Drinks.

CHAP. XLIV.

Of Wounds of the Liver, Spleen, Kidneys, Emulgent Vein, Artery and Bladder.

Q. *What are the Signs of a wounded Liver?*

A. A great Flux of the Blood on the right ſide, and the ſide drawn towards the *Spine*; the Patient delights to lie upon his Belly, the *Scapula* ſtretched, and pricking Pains even to the Neck; they have a Fever, and ſometimes void Blood by Urine, *&c.*

Q. *What are the Prognoſticks?*

A. (1.) If theſe Wounds are ſuperficial, they admit of Cure; if deep, not. (2.) If cold faint Sweats ſeize the Patient, and he thereupon grows weak, Death is at hand.

Q. *Why are deep Wounds here mortal?*

A. (1.) There is a great Flux of Blood. (2.) Inflammation. (3.) Vulnerary Potions loſe much of their Energy before they can reach the Part. (4.) It lies ſo deep, that Medicines cannot well be applied. (5.) Matter cannot be diſcharged, and ſo the whole Liver may be corrupted, from whence Sanguification is hindered, and a Conſumption or Dropſy procured, *&c.*

Q. *What is to be done, if you are called to dreſs ſuch a Wound?*

A. Diſſolve *aſtringent Troches in Aq. Plantag.* or *Burſa Paſtoris cum Syr. Roſ. ſicc. Myrtil. & Granat.* &c. and give inwardly vulnerary Drinks, *&c.*

Q. *What are the Signs of a wounded Spleen?*

A. Black

A. Black Blood flows from the left ſide; the Side and Stomach become hard; Thirſt increaſes, and the Pain reaches to the Neck.

Q. *What are the Preſages in this Caſe?*

A. Some affirm that the whole Spleen may be taken out, and the Patient live; tho' it is certain that deep Wounds of it are for the moſt part deadly; or at beſt, the Body becomes ill affected, ſo that Dropſy, Scabs, and ſuch Diſeaſes may ſeize it.

Q. *Why do Wounds of it commonly prove mortal?*

A. (1.) Becauſe a great Flux of both *Venal* and *Arterial* Blood doth follow. (2.) It is a part helping Sanguification, and being wounded, is obſtructed in the Performance of its Duty. (3.) It is eaſily inflamed. (4.) Becauſe it hath a great conſent with the Heart, by Communication of the Arteries; by which (from the Quittor and putrify'd Blood) *noiſome Vapours* may be ſent to the Heart.

Q. *How are theſe Wounds cured?*

A. As Wounds of the Liver.

Q. *What are the Signs if the Kidneys are wounded?*

A. If it reach to the *Pelvis*, clotted Blood will come forth by Urine; there will be a great Pain in the Part, which will reach to the Groin and Teſticles.

Q. *What are the Prognoſticks?*

A. (1.) If the Wound be received through the Back, it is mortal. (2.) If it be received by the Side, and pierce no further than the *Carunculæ Papillares*, it may be cured, but with much Difficulty. (3.) If it pierce to the *Pelvis*, it is moſt commonly deadly.

Q. *Why do Wounds of the Kidneys, received by the Back, prove mortal?*

A. Becauſe the Wound muſt pierce the *Pſoa*, and the Nerves ſpringing therefrom, the *Spinalis Medulla* can hardly eſcape.

Q. *Why are theſe Wounds of difficult Cure, tho' penetrating no farther than to the* Carunculæ Papillares?

A. Becauſe both the Muſcles of the Belly and the Peritonæum muſt be wounded alſo, between whoſe Membranes the Kidneys are wrapped.

Q. *Why do the Wounds prove mortal, if they reach the* Pelvis?

A. (1.) Becauſe the draining of the Seroſity from the Veins and Arteries, is ſo very neceſſary, otherwiſe it would hinder the Union of the Wound. (2.) Becauſe the Subſtance of it being very *compact*, does very difficultly admit of Conſolidation.

Q. *Suppoſe the* Emulgent Vein *and* Artery *be wounded?*

A. Then Death may be expected, becauſe of the deſperate Flux of Blood which will enſue; nevertheleſs the Cure may be attempted by healing Injections, and giving inwardly vulnerary Potions, or *Lac recent.* in which diſſolve *Sacc. Roſat. Troch. Alkekengi cum Opio*, or *ſine Opio*, as your Judgment directs you.

Q. *What are the Signs of a wounded Bladder?*

A. (1.) The Urine comes bloody and ſparingly. (2.) If the Urine falls into the Cavity of the *Abdomen*, it will ſeem to be an *Aſcites*, and the Pain will be ſent to the Groins and Teſticles.

Q. *What are the Prognoſticks?*

A. (1.) Wounds in the fleſhy part of the Neck of the Bladder may be cured; as may thoſe in the ſides of the Groin, if the Patient be young. (2.) Wounds in the Membranous Parts of the Bladder are incurable, becauſe the Bladder is nervous, thin, and has but little Blood, it is apt to mortify; the

the Acrimony of the Urine will not ſuffer the Wound to heal; and it is attended with dreadful Symptoms.

Q. *How are theſe Wounds to be cured, if curable?*

A. (1.) Admit of no cold Water to be drank. (2.) Give vulnerary Potions, in which diſſolve *Syr. Roſ. ficc. Mel Roſar. Gum. Tragacanth*, &c. and to the Wound apply *Tereb. Cypr. Ol. Ovor. Vitel. Ovi*, &c.

CHAP. XLV.

Of Wounds of the Nervous Parts.

Q. *WHat do you intend here, when you ſpeak of Wounds of the* Nervous Parts?

A. I mean *Nerves, Tendons*, and *Ligaments.*

Q. *By what Signs will you know a Nerve to be wounded?*

A. (1.) By the Part; if many and great Nerves be in the place wounded, or that paſs by it. (2.) Pulſation, Raving, Convulſion, Inflammation, Mortification, *&c.*

Q. *What are the common* Accidents *happening to Nerves?*

A. A Puncture, an Inciſion, a Contuſion, and Diſtortion.

Q. *What are the Prognoſticks in Wounds of the Nerves?*

A. All Wounds of the Nerves are dangerous.

Q. *Why?*

A. (1.) Becauſe the *Membrane*, with which they are covered, proceeding from the *Meninges*,

makes them *exquiſitely ſenſible*, and they are filled with *Animal Spirits.* (2.) Becauſe of their conſent with the Brain and the *Spinalis Medulla.* (3.) By reaſon of the fearful Symptoms which follow.

Q. *What are the general Indications of Cure?*

A. (1.) To prevent the Flux of Humours, breathe a Vein, and give gentle Catharticks. (2.) Uſe a very ſlender Diet. (3.) Let the Air be warm. (4.) Uſe all your Applications warm.

Q. *How will you know when the Heat of the Medicine is proportioned to that of the Part?*

A. (1.) If the Patient, upon the Application, feel a pleaſant Heat. (2.) If the Part is poſſeſſed with a pleaſant Itching; but if the Party feel either no Heat at all, or too much, upon the Application of the Medicine, it is not as it ought to be.

Q. *How is a Puncture of a Nerve to be cured?*

A. By Medicines hot, dry, and of ſubtle parts, to digeſt, attract, and dry the Putrefaction; (*viz.*) *Ol. Tereb. Spir. Vini, Euphorb. Ol. Roſar. cum Sal. Com.* &c.

Q. *But what will you do, if Symptoms do not abate upon theſe Applications?*

A. Then make croſs Inciſion of the Skin, that Medicines may have their due *Energy* on the punctur'd Part, when perhaps it may be neceſſary to compound your Applications in milder forms.

Q. *Which is leaſt dangerous, a* Nerve *quite divided, or only cut partly through?*

A. That quite divided.

Q. *Why ſo?*

A. Becauſe then it cannot ſend any Harm to the Brain; but *the Uſe of the Part is for ever loſt.*

Q. *How are ſuch Wounds to be cured?*

A. The Topicks muſt be dry, and but very little biting, as *Unguent. de Calce lot.* &c. and by *Sarcoticks*,

Sartocicks, ſuch as in our Conference have been often repeated.

Q. *How muſt it be dreſt, if but in part divided?*

A. As directed already at the beginning.

Q. *But if Symptoms do not abate, how then?*

A. Then, (rather than to expoſe the Patient to the Danger of Death) it will be beſt, quite to divide it; then to uſe Anodyne, and drying Medicines, with Fomentations, Cataplaſms, *&c.* formerly preſcribed.

Q. *Suppoſe the Nerve to be* contuſed, *or bruiſed?*

A. If there is no Solution of Unity, embrocate with *Ol. Lumbricor. & Terebinth.* hot, and apply *Empl. Stict. Paracelſ.* malaxed with *Ol. Hyper. Comp.* &c. ſpread on Leather.

Q. *Suppoſe a* Diſtortion *of the Nerve, which hinders the Motion of the Part?*

A. Embrocate *cum Unguent. Nervin. & Ol. Terebinth.* and apply a *Cerat. ex Empl. è Mucilag. & Gum. Ammoniac.* &c.

Q. *But what muſt be done, if after this, a Hardneſs and Numbneſs of the Part remains?*

A. Embrocate with *Ol. ex Pedibus Bovin. Lil. alb. Adeps Anſeris, & Gum. Bdellii, cum Mucilag. ex Rad. Altheæ, Sem. Lini & Fœnugrec.* warm, and over the Part apply *Empl. Diach. cum Gum.* ſoftened with *liquid Storax*, &c.

Q. *What muſt be done when an Inflammation attends a wounded Nerve?*

A. Embrocate *cum Ol. Sambucin. & Acet. Roſat.* and over all apply a Cataplaſm *ex Far. Hord. Orobi, Oximel.* &c.

Q. *What muſt be done to abate Pain?*

A. Bleed, purge, uſe a ſpare Diet, and apply a Cataplaſm *ex Far. Fabar. Fol. Malv. & Violar.*

lar. coct. in Lacte. recent. cum Unguent. Populeon, &c.

Q. *Suppose a Convulsion seize the Part?*

A. Embrocate the *Spine* and wounded Member *cum Ol. Cham. Lavendul. Succini, Rorismarin.* &c. hot, and apply to the Member the inside of a Sheep's-Skin, newly killed.

Q. *How will you know if a* Tendon *be wounded?*

A. (1.) If the Wound be near the Joint. (2.) If it be in a Part that is not fleshy, *&c.*

Q. *What are the Indications of Cure?*

A. The same as those in a wounded Nerve.

Q. *How are wounded Ligaments to be cured?*

A. By Medicines drying, and not too hot, *Ol. Mastich. Balsam. Natural.* and consolidating Powders.

CHAP.

CHAP. XLVI.

Of Wounds of the Joints.

Q. *HOW are the Wounds of the Joints to be cured?*

A. If it be a Puncture, it is to be managed as a Puncture in a Nerve or Tendon; but if it be by Inciſion, they are to be ſtitched, leaving a Place for diſcharge of Matter in a depending Part; and let all your Applications be very drying, and applied hot, *Liniment. Arcæi, Pulv. Myrrh. Sarcocol. Maſtich. Aloes*, &c. and over all apply a Cataplaſm *ex Far. Hord. & Fabar. Flor. Cham. Melilot. Acet. Sambuc. Ol. Roſ. Popul.* &c.

Q. *What is to be conſidered in theſe Wounds?*

A. Chiefly the due Poſition of a Member, that it may not be kept in ſuch a Poſture, as that the Limb may be uſeleſs when the Wound is healed.

Q. *How is that?*

A. (1.) If the upper part of the Shoulder be wounded, put a large Boulſter to the Arm-pit, and carry the Arm in a Scarf. (2.) If the lower part of the Arm be wounded, carry it in a Poſture between *Extenſion* and *Contraction*; and when the Lips unite, uſe a moderate Motion of the Limbs. (3.) If the Joint of the Elbow be wounded, take care that it may not be too much contracted nor extended. (4.) If the Wriſts or Joints of the Fingers be wounded, keep them half ſhut, moving a Ball in the Palm of the Hand; otherwiſe they may prove uſeleſs when the Wound is healed.

CHAP. XLVII.

Of Amputation.

Q. *WHY is Amputation performed?*

A. To preſerve the Life of the Patient, which otherwiſe would be loſt.—*Immedicabile enſe reſcidendum eſt.*

Q. *When is it to be done?*

A. When there is no Poſſibility of ſtaying the Mortification, or ſaving the Life and Limb without it.

Q. *In what Part is it to be made?*

A. If in the Arm or Thigh, it is to be as near the Wriſt or Knee as poſſible; but let it be where it will in the Leg, your way is to take it off about three or four Inches below the Knee; for a long Stump of the Leg is both troubleſome and unſeemly.

Q. *How is it to be performed?*

A. Place the Patient to your mind, having ſufficient Help to aſſiſt you, let one of your Aſſiſtants *draw* up the Muſcles *very tight*; then about two or three Fingers breadth above where you deſign to take off the Limb, make a very hard Ligature, and a Hand's breadth above that, make another ſlack; which muſt be turned about with a ſhort Stick, (which is called a *Batoon*, or a *Turniken*,) till it *numbs* the Part; then let one Aſſiſtant hold the upper Parr, and another the lower Part of the Limb ſteady; then (ſtanding within ſide of the Limb) with two Stroaks of your diſmembring Knife, divide the Fleſh, (and with the back of it, the *Perioſteum*) and then as near to the

upper Part as poſſible, with your Saw, take off the Bone, with as few Stroaks as you can; (remembring, that if there be two Bones, as below the Elbow and in the Leg, that you firſt divide between them with your *Catling*.) Then take Dorſels, being firſt armed with your Reſtrictive, and then dipt in ſcalding hot *Ol. Terebinth.* and apply to the Mouths of the Veſſels; to the Bone a Pledget of dry Lint, and to the Stump two large Pledgets, one larger than the other, yet both ſo big as will cover all the Stump, armed with *Pulv. Reſtring. maj.* made ſoft with *Alb. Ovi. & Acetum*; all which keep hard on with your Hand, till your Aſſiſtant looſes the firſt Ligature, and ſhoves down the Muſcles over the Stump. Then over all pull on an Ox-Bladder, and over that a croſs Cloth hauled up *torte*, to keep all on firm; then with a ſingle Roller make ſeveral Turns about the croſs Cloth, rolling ſometimes upwards and ſometimes downwards till all be uſed. Then with a double-headed Roller, roll all the Dreſſings on equally to the Stump, taking care, that it be neither too *ſlack* nor too *torte*; (for the firſt would not reſtrain the Hemorrhage, and the ſecond would cauſe Pain, Inflammation and Mortification.) Then take off that Ligature belonging to the Batoon, or at leaſt, ſlacken it; and ſo put your Patient into his Bed, with his Stump raiſed, and ſome one to ſit by him, to apply their Hand to it, till the Dreſſings dry on.

Q. *Suppoſe you amputate for a Mortification?*

A. If poſſible, take it off two Fingers breadth above the Mortification; or if it ſo happens that you cannot, then after the Limb is off, you muſt apply to the Stump actual Cauteries, to dry up the Humidity, and recall the Spirits to the Parts; and then dreſs it up *S. A.*

Q. *Is*

Q. *Is there no other way to ſtop Bleeding, but* Ol. Terebinth. *and the actual Cautery?*

A. Yes; Many make Ligature on the Ends of the Veſſels; and if you amputate where there are great Veſſels, it will be convenient, inſtead of Dorſels, to have Buttons made of Tow, armed with a Reſtrictive, and dipt in hot *Ol. Tereb.* and ſo apply them, and dreſs up the Stump as before directed, having firſt made the *croſs Stitch*, which will help to ſtop the Flux of Blood, and make a round handſome Stump alſo: And indeed, the *croſs Stitch* is a more quick way than to take up the Arteries, and full as ſecure: For in all the Sea-Fights which I have been in, (which have been pretty many) I never uſed any other Method, and never had any Hemorrhage attending, nor ſucceeding it.

Q. *When is it to be opened again?*

A. Not till the third or fourth Day; but in the *Interim*, you are to ſee that it does not bleed, and eaſe the Bandage, if there be occaſion.

Q. *How is it to be dreſſed the firſt Dreſſing?*

A. Have in readineſs ſome warm Water and a Sponge, to ſoften the Dreſſings, that they may be taken off, without cauſing a new Flux; which done, wipe it clean, and apply a dry Pledget to the Bone; and to the Stump, Pledgets armed either with *Baſilicon*, or a Digeſtive *ex Tereb. Ven. Vitel. Ovi, Far. Tritic. Ol. Catellor.* or *Lumbricor. & Croc.* then with a Pledget of dry Tow over all, with a croſs Cloth and double-headed Roller, lay him by for that time.

Q. *And how then?*

A. The next Day have in a readineſs a good Fomentation, in which let Stupes be wrung out ſcalding hot, and ſo applied for half an Hour together; then dreſs it up as you did the Day be-

fore, and ſo continue till the Wound is well digeſted; every Day dipping the Pledgets in *Spir. Vini* warm; and then cure it as other Wounds of the fleſhy Parts, taking care to prevent a Fever, or ill Accidents.

CHAP. XLVIII.

Of a Gangrena or Mortification.

Q. *What is a Mortification?*

A. It is when the natural Heat of a Limb is *in part* extinguiſhed; the Limb is diſcoloured, cold, and *in part* inſenſible.

Q. *What is a* Sphacelus?

A. It is when the natural Heat is *wholly* extinct, the Limb is *dead, livid, veſicated, quite inſenſible,* and *fœtid.*

Q. *What is to be done in this Caſe?*

A. Amputation without delay.

Q. *But ſuppoſe it is only a Mortification?*

A. Then ſcarrify the Part till it bleeds, and the Patient feels it; then apply ſcalding hot Stupes for half an Hour, wrung out of a ſtrong Fomentation, wherein is put a quantity of *S. V.* or Brandy; and to the Scarrifications apply either *Ol. Terebinth.* ſcalding hot, or *Spir. Vin. & Ægyptiac.* and dreſs it twice a Day, till the Mortification ſtops, the Sloughs ſeparate, and the Scarrifications digeſt; then mundify, incarn and cicatrize, as in other Caſes.

CHAP. XLIX.

Of Fractures in general and particular.

Q. *WHat is a* Fracture?

A. It is a *Solution of Unity* in a Bone, arising from some violent external Cause; it is called in Greek Κάταγμα.

Q. *How is a Fracture made?*

A. Three ways; *viz.* (1.) *Transverse*, as when a Stick is broke short off. (2.) *Streight*, when the Bone is split up and down like a Plank. (3.) *Oblique*, when it is compounded of both the former.

Q. *How will you know when a Bone is fractur'd?*

A. (1.) By the crackling of the Bones as you handle the Part. (2.) By the violent Pain in the Part, if it be handled. (3.) Commonly there is a Prominence or bunching out. (4.) The Limb is without Strength, and useless, and sometimes there is a Shortness in it; but these are Signs attending the *Tranverse* and *Oblique* Fracture only.

Q. *How will you know when it is* split lengthways?

A. The Part is *thicker* than naturally it should be, with Pain and Unevenness, *&c.*

Q. *How many sorts of Fractures are there?*

A. Two; (*viz.*) *Simple* and *Compound*; the one is without a Wound, and the other ever attended with one.

Q. *Which are attended with most danger?*

A. The Compound ones *without dispute*, and those again in the great Bones, and near the Joints.

Q. *How*

Q. *How many Intentions of Cure are there in a Simple Fracture?*

A. Five; *viz.* (1.) To put the fractur'd Bones exactly together again; which is done by Extenſion and Reduction. (2.) To keep the Parts ſo put together in their right places. (3.) To manage the Cure as it ought. (4.) To endeavour to breed a Callus. (5.) To correct ill Accidents.

Q. *What Damage comes by not making right Extenſion?*

A. If it be more violent than it ſhould, it cauſes Fevers, Pain and Convulſions, and ſometimes Palſies; and if it be leſs than it ſhould, the Shivers of Bone will rub one againſt another, and break, and ſo by their pricking on the *Nervous Parts* cauſe Pain; but the bigger the Bone, the more violent Extenſion ought to be.

Q. *How is the Operation to be performed?*

A. Either by the *Surgeon's Hand alone*, (as in young Children) or by *Pulleys*, as in very ſtrong Bodies, or where the Fracture has remained long unreduced; or by two Aſſiſtants, the one holding the upper, and the other the lower Part of the Limb, and ſo making due Extenſion, till the Surgeon with his Hands gently and exactly reduces the fractur'd Bones.

Q. *How will you know when the Bone is well reduced?*

A. If compared with the ſound Limb, it be found to be uniform with it; or if no Hollowneſs nor Inequality remain in the Part, and if Pain be abated, theſe are all good and certain Signs.

Q. *How are the Parts of the broken Bone to be kept united?*

A. Having reduced the Fracture, apply all round it, either *Empl. è Bolo*, or *Bol. ver. & Poſca*, made into the form of a *Liniment*, and ſpread up-

on a ſoft Cloth; which ſimple Compoſition alone is of more Effect to eaſe Pain, prevent Inflammation and a Flux of Humours to the Part, than any Medicine whatſoever that I ever yet met with, however pompous the Title may be. Then with a Linen Roller dipt in *Poſca*, take three or four Turns round the Fracture, and from thence roll upwards as far as you ſee convenient, and ſo downwards again to the Fracture; then to that part of the Fracture which bunched out, apply a Boulſter dipt in *Poſca*, and then with a double-headed Roller take a Turn or two about the Fracture, and ſo paſs one part upwards and the other downwards, till you have ſpent it all; and then round the Limb, (with three Pieces of Tape) tye (pretty hard on) as many Splints of good Paſt-board, armed at the Ends, as will compaſs the Part: and then bleed the Patient, and lay him in his Bed, as eaſy as you can, and his Leg in a Caſe, made for that purpoſe, to keep it firm, and every thing hollow from it; keep his Body ſoluble, and him to a ſpare Diet.

Q. *How will you know if the Bandage be good?*

A. (1.) By the Patient's Eaſe. (2.) If the next Day, a looſe ſmall Tumor appear in the extreme Part, the Bandage is good; and on the contrary, if no Swelling appear, or a great and hard one, it is bad: for the firſt ſhews that the Fracture is not kept ſo hard rolled as it ought, and the latter cauſes Inflammation.

Q. *When are Dreſſings to be taken off?*

A. Not till the ſeventh Day, except you ſee abſolute Neceſſity.

Q. *How is it then to be managed?*

A. If you find all things well, embrocate with *Ol. Roſar.* and apply a Cerecloth, *ex Empl. Diapal. ad Herniam & Paracelſ.* and roll it up as at firſt; only

only firſt remember, that if it is poſſeſſed with a *troubleſome Itching*, let it be bathed in warm Water; by which Method, the *Tone* of the Part will be *preſerved*, and the Subſtance of the Bone kept ſound, if rightly followed.

Q. *When do you endeavour to breed* Callus?

A. About the ſeventh Day.

Q. *Of what is* Callus *bred?*

A. Of the Nouriſhment of the Bone, ouzing out of the Edges of the Fracture, which grows hard about the fractur'd Ends; and though it is not Bone, yet it is ſo hard, that it will ſooner break in any other part, than where the *Callus* is bred.

Q. *What are the Indications here?*

A. (1.) To ſupply fit Matter. (2.) To keep it from being waſhed away from the Edges of the Fracture.

Q. *How is fit Matter to be ſupplied?*

A. The Food muſt be thick and *viſcid.* Rice, Wheat, Feet and Heads of Calves and Sheep, and Neats; and that by degrees in a larger Latitude. Some give inwardly *Oſteocolla*; let your Applications be *implaſtick*, and your Bandage not too hard.

Q. *How will you know when Bandage is* leſs *or* greater *than it ſhould be?*

A. If it is leſs than it ſhould be, if you touch the Part, little or no *Callus* is felt, and the Part is weak in Motion, *& è contra.*

Q. *How is want of* Callus *to be remedied?*

A. Greater Liberty in Diet muſt be allowed, the *Aſtringents* muſt be more gentle, the Bandage muſt be ſlacken'd, and the Part muſt be bathed with warm Water, till it looks red and ſwell; and if there is too much *Callus*, the contrary Courſe is to be taken.

Q. *Suppoſe that by over-ſtreight Rolling,* &c. *the Limb grows ſmall?*

A. The Patient muſt be nouriſhed, and Plaiſters of Pitch applied, and haſtily pulled off again *ſeveral times* one after another, that the pulling off the Hair may cauſe Pain, and ſo attract Nouriſhment to the Part; and then pour warm Water upon it, *&c.*

Q. *Suppoſe that after the Fracture is cured, the Limb is not in its right Figure?*

A. If the Limb be not hurt in its Motion, or if the *Callus* be old, and the Patient weak, and old too, he muſt be ſatisfied without ſtriving any further; but if he be young and ſtrong, and the *Callus* new, the only way is to break the Fracture again.

Q. *How is that to be done?*

A. For ſeveral Days bathe the Part with a Decoction of *Althea*, *Malva*, &c. boiled in Neats-Foot Broth, and apply *Empl. è Cicuta, cum Axung. Porcin.* and then with Strength of Hand break the Bone again, (laying it upon ſome hollow place) then reduce it as it ought, and cure it as other Fractures.

Q. *Tell me how* particular *Fractures are to be reduced?*

A. The Operation is ſo alike in all Fractures, that it is almoſt needleſs to mention Particulars; however, take theſe few Inſtructions. If the *Clavicle* or Collar-Bone be broke, let an Aſſiſtant ſtand behind the Patient, and take hold of both his Shoulders, and pull them *back*, whilſt he preſſes with his Knee between the two *Scapula's forwards*, and then you may eaſily reduce it with your Hands. If a *Rib* be broke, the Patient muſt be laid thwart a Cask, or ſome other thin convex thing, with his well Side downwards. And if the *Os Femoris*

or

or Thigh-Bone be broke, take care you are not deceived; for the Bone is naturally crooked in all, as may be ſeen in every *Skeleton*; and the Part being very fleſhy, the Bone is with difficulty kept in its place.

Q. *Suppoſe the* Patella *or Knee-Pan be fractur'd?*

A. This ſeldom happens; but if you meet with ſuch an Accident, and it be broke *tranſverſe*, a Lameneſs will attend the Patient ſo long as he lives; but if the Fracture be right up and down, not ſo, (if it be well managed.) And the Reaſon is plain, for if the Fracture is tranſverſe, the ſeventh, eighth, and ninth Muſcles drawing upwards, and the Tendon inſerted in the *Patella* drawing downwards, it is almoſt impoſſible that the *Patella* ſhould ever be joined as it ought; but in a Fracture there, *right up and down*, the Ends of the ſeventh, eighth, and ninth Muſcles that move the Leg, meeting about the *Patella*, and ending in a ſtrong *Tendon*, which involving the *Patella*, the Fracture is apt to cloſe of itſelf, and ſo remain. However, if either of them happens, uſe all your Art to reduce it, and by Boulſters and good Bandage to keep it in its place, and cure it as other Fractures, *&c.*

CHAP. L.

Of a Compound Fracture.

Q. *HOW is a Compound Fracture to be managed, where neither the Bone is made bare, nor do we look for any Piece of Bone to come away?*

A. Firſt reduce the Fracture as is before taught. (2.) Bring the Lips of the Wound together, and ſtitch them. (3.) To all the Fracture apply *Aſtringents* and *Glutinatives*; and to the Wound, if there is no Bleeding, only a Pledget dipt in *Vin. Rub. & Ol. Roſar.* and over that the nine or fifteen *tailed Bandage*, whoſe Ends are to lay over one another on the Wound, and be pulled indifferent tight; then over that, Slips of Linen Cloth, *ſix or eight double*, laid right up and down at about a Finger's breadth diſtance one from another, quite round the Limb, except upon the Wound; and over every one of them, Splints of Paſtboard tied on with three Tapes, one above and the other below the Wound, and the third ſo contrived that the Wound may be dreſt without untying the other two, or moving the Limb: and this muſt be tied not any ways hard. Then if need be, bleed; keep the Patient to a thin Diet, and his Body ſoluble; dreſs the Wound every Day, digeſt, mundify, incarn, *&c.* as in other Wounds.

Q. *Suppoſe the Bone is not made bare, yet we look for a Piece of the Bone to come away?*

A. (1.) If any Piece be looſe in the Wound, take it away immediately; but if it ſticks faſt, uſe no Violence to it. (2.) Give free diſcharge to the Matter, and let not the Bandage be too hard.

hard. (3.) Dip all the Bandages in *Vin. Rub. & Ol. Roſ.* (4.) When the Inflammation is over, uſe all your Endeavours, that the Bone may be thruſt forth, which Nature will in time do; but it may be helped by Medicines, as *Cera, Citr. Euphorb. Rad. Ariſtol.* or *Tinct. Myrrh.*

Q. *But ſuppoſe the Bone be made bare?*

A. If no Pieces are ſeparated, reduce it and defend it from the Air, and proceed as before taught, (in a Compound Fracture where the Bone is not made bare) only remember, not to uſe any oily or fat Applications, *&c.*

Q. *Suppoſe the Ends of the two Bones lie over one another, ſo that you cannot by any means reduce them?*

A. Then you are to ſaw off one of the Ends, and reduce them, and proceed as is already directed.

Q. *How will you do if a Mortification ſeizes the Part?*

A. Take off all the Dreſſings, ſcarrify, and apply hot Stupes, and proceed as I before taught in Chap. XLVIII.

CHAP. LI.

Of Diſlocations in general.

Q. *What is a* Diſlocation?

A. Diſlocation, Luxation, or ſlipping out of Joint, is when the Head of ſome Bone is forced out of its own proper *Sinus* into another place.

Q. *How many ſorts of Diſlocations are there?*

A. Three: (1.) When Bones are ſeparate and gape, which before were joined, as when the *Scapula* parts from the *Humerus*, or the *Radius* from the *Ulna*, or the *Tibia* from the *Fibula*. (2.) When Bones are lengthened through Laxity of the Ligaments, and then the Head of the Bone ſtarts a little out of its place, and is eaſily reduced. And, (3.) When the Bone is wholly out of its place; and this is called a perfect Diſlocation.

Q. *What are the Signs of a perfect Diſlocation?*

A. (1.) Motion is loſt. (2.) An Hollowneſs appears from whence the Bone is ſlipt, and a Prominence on the contrary ſide of the Juncture. (3.) The Limb is generally ſhortned. (4.) That Limb is unlike the ſound one, both in Figure and Site. (5.) There is joined to all the former, *grievous Pain.*

Q. *What are the Signs of that Diſlocation where the Bones gape, or are ſeparated?*

A. (1.) The Thickneſs of the Limb is more than it naturally ſhould be. And (2.) Where the Heads of the Bones meet, the Thickneſs is much greater.

Q. *What are the Signs of that ſort of Luxation, when the Bones are lengthened?* *A.* (1.)

A. (1.) The Limb hangs dangling and diſorderly, and turns any way. (2.) When the Bone is reduced, the Limb becomes of its natural length; and when it is let go, it immediately ſlips out again. (3.) There is a Cavity quite round the Joint.

Q. *What are the Signs of a Diſlocation well reduced?*

A. (1.) It is known by the Patient's Eaſe. (2.) By the natural Figure of the Limb and Joint, which if compared with the other, will be exactly like it. (3.) Motion is reſtored. And, (4.) The Head of the Bone generally *ſnaps* as it ſlips in.

Q. *How many Intentions of Cure are there in a Luxation?*

A. Four: (1.) Extenſion. (2.) Reduction. (3.) Bandage. (4.) To correct, or keep off Accidents. The (1.) is performed by Aſſiſtants or Pulleys. The (2.) by the Surgeon's Hand. The (3.) by handſome Rolling, Boulſters, *&c.* And the (4.) by fit Medicines, Bleeding, Purging, Diet, *&c.* Again, the (1.) muſt be done gently, for fear of Contuſion, and avoid twiſting about the head of the Bone, leſt you break the Edge of its *Sinus.* The (2.) muſt be done ſpeedily and effectually at once. The (3.) muſt be done ſo as to keep the Limb in its right Poſture, and to prevent Inflammation. And the (4.) is done by *Aſtringents*, ſuch as are preſcribed in Fractures; and order every thing elſe according to Reaſon and Art.

Q. *Suppoſe the Diſlocation be old?*

A. (1.) Endeavour to ſoften and diſcuſs the Matter which is flowed into the Joint, with *Diach. cum Gummi*, or Compoſitions *ex Rad. Althæa, Fol. Malv. Far. Lini. Fœnugrec. Ol. Oliv. Axung. Porcin.* &c. having firſt well rubbed the Part; or hold the Limb often and long in a warm Bath, *&c.* and then proceed as in a new Diſlocation.

CHAP.

CHAP. LII.

Of particular Diſlocations.

Q. *What are the Signs of luxated Jaws?*

A. If they be luxated on both ſides, (1.) The whole Jaw appears prominent forwards. (2.) The Mouth cannot be ſhut. (3.) The lower Teeth ſtand out further than the upper. (4.) The temporal Muſcles are ſtretched out *very torte* and *hard.*

Q. *How is it to be reduced?*

A. Put both your Thumbs (armed with double Boulſters) into the Patient's Mouth, and with your Fingers take hold of the outſide of his Chin, then force the Jaw-Bone downwards, backwards and upwards, whilſt ſome Aſſiſtant all the while holds his Head ſteady; then anoint the temporal Muſcles with *Ol. Roſar. & Lumbricor.* &c. and if need be, apply Aſtringents alſo. Then roll up the Parts *decently*, bleed him, and for three or four Days keep him to Liquids only.

Q. *What are the Signs of a diſlocated Shoulder?*

A. It is in Figure very unlike the ſound Shoulder, having a Cavity on the top, and the head of the Bone may be felt prominent in the *Axilla* or Armpit; the upper Proceſs of the *Scapula* appears ſharp; the Arm cannot be brought to the Ribs; and laſtly, it is longer than the other Arm, and attended with extreme Pain. Thus far of the Signs of a Shoulder diſlocated downwards, which it moſt commonly is; and if it be luxated forwards, the Signs will be evident without any Direction.

Q. *How is the Shoulder to be reduced?*

A. Se-

A. Seven ſeveral ways; *viz.* (1.) By *Circumrotation*, when you or the Patient puts the Fiſt doubled under the Armpit, ſo that the middle Knuckles may force the Bone into its place, whilſt with your other Hand you make moderate Extenſion, and keep the Bone in a circular Motion: but this is to be uſed only to Children and tender Bodies. (2.) Let the Patient ſit; then put your Head to the Patient's Shoulder, and your Fingers under his Armpits, and then your ſelf, or ſome Stander-by, preſs the Patient's Elbow (with the Knee) towards his Ribs. (3.) Lay the Patient down upon the Floor, on which do you ſit down alſo, and take hold of the diſlocated Arm with both your Hands, and put your Heel under his Armpit, (having firſt placed a Ball there) and then let a Servant take hold of the oppoſite Arm, and draw it downwards; and another having a ſtrong Roller, (ſo broad as may take hold of the Ball) let him take hold of both its heads, and draw them up towards the Patient's Head, and with his Foot preſs upon the diſlocated Shoulder, by which the head of the Bone will ſlip in. (4.) Let the Patient ſtand upon a Stool, and place his diſlocated Arm over a tall Man's Shoulder, who muſt hold the Arm faſt down before his own Breaſt; then let ſome one trip away the Stool, that the Patient's Weight may cauſe the Bone to ſnap in. (5.) Set the Patient near ſome Poſt, and let a Pole with a Prominence fix'd in its middle, (which we call a *Colt-Staff*,) be held between two ſtrong Men, then let the Patient's Arm be put over the Pole, with the Prominence fixed cloſe to his Ribs, up cloſe to the head of the Bone; then let your Aſſiſtant hold down his Arm, extending it very ſtrongly, and preſſing it towards his Ribs, or elſe with a Pully faſtned to the Poſt,

and to his Arm above his Elbow, to make Extenſion that way; and then you muſt ſtand on the contrary ſide, with both your Hands on each ſide of the *Scapula*, to preſs it down, and to keep the Patient firm in his Seat, and govern the Operation. (6.) Over a Ladder, which is to be managed much as that over a Man's Shoulder. (7.) By the *Gloſſocomium* or Commander, which is to be uſed with Caution in tough Bodies, and where the Bone has been long out. Theſe are the moſt common ways now in uſe. This being done, apply your Dreſſings, place a good Boulſter under the Arm, and roll him up, and bleed him, and keep his Arm quiet, till the Joint gathers Strength, and that the Inflammation and Swelling are over.

Q. *Suppoſe a Diſlocation of the Shoulder, and a Fracture on the* Os Humeri; *which would you reduce firſt? And why?*

A. I would reduce the Diſlocation firſt, becauſe if I did not, I ſhould diſplace the fractur'd Bones, by reducing the Diſlocation after the Fracture, and ſo cauſe new Work, and Pain to the Patient, and act inartificially and prepoſterouſly.

Q. *We will now diſcourſe of the luxated Elbow, pray tell me how many ways is the* Ulna *or Cubit luxated?*

A. Forward or backward, outward or inward, and ſometimes the *Radius* follows, and ſometimes it does not. If it be luxated forward, the Arm cannot be bent; the Cubit is ſhorter; a Tumor appears on the fore-part, and a Cavity behind; if backward, the contrary: and ſo if outward or inward, by the ſame Tumor and Cavity you may judge of it.

Q. *How is it to be reduced?*

A. If the Luxation be forwards, Extenſion muſt be made obliquely by two Aſſiſtants; then let a hard

hard Body of Linen be placed on the inſide of the Joint, and over that a Girt ſo long as that you may put your Foot into it. Then whilſt they make *due Extenſion*, (by your Foot in the Girt, and by your Hands) bend it, and reduce it; or in tender Bodies it may be done by your Hands alone. If the Luxation be backwards or *recent*, it is eaſy to reduce by the Hand alone, if an *oblique Extenſion* be made very ſtrong. If it be ſlipt inwards or outwards, it is to be reduced the contrary way; then embrocate *cum Ol. Roſar. & Aceto*, and apply your Reſtrictives, make decent Bandage, place the Arm in a middle Poſture, bleed the Patient, keep him to a cooling Diet, and his Body ſoluble.

Q. *How many ways may the* Carpus, *or Wriſt, be diſlocated?*

A. Inward, outward, forward and backwards; but commonly forward.

Q. *What are the Signs of this Luxation?*

A. A Tumor on the fore-part, and the Fingers cannot be bent; if it be backward, the Fingers cannot be extended: if it be inward or outward, a Tumor appears on one ſide, and a Cavity on the other.

Q. *How are theſe Luxations reduced?*

A. If the Luxation be either forward or backward, the Hand muſt be laid upon ſome Table, with the back downwards, if the Diſlocation be forwards; and if it be backwards, the contrary: then let good Extenſion be made, and with your Hand force the Bone into its place.

Q. *How are the luxated Bones of the* Carpus *and* Metacarpus *to be reduced?*

A. By a moderate Extenſion, laying the Hand on a Table, and ſome hard Subſtance put under it, *&c.* Then apply fit Medicines, Rolling, *&c.* as has been taught.

Q. *How*

Q. *How many ways may a Thigh be diſlocated?*

A. Outwards, inwards, forwards and backwards; but oftenеſt inwards, becauſe there the Edge of the *Acetabulum* is loweſt, *&c.*

Q. *What are the Signs of* ſuch a Luxation?

A. If the Luxation be inwards, that Thigh appears longer than the other, and the Knee, Leg and Foot ſtands outwards, and a Tumor appears near the *Perinæum.* If the Luxation be outwards, the Signs are contrary, that Leg is ſhorter; near the *Perinæum* there is an Hollowneſs, the Knee, Leg, and Foot, ſtand inwards, and the Heel cannot touch the Ground. If the Diſlocation be forwards, the Thigh cannot be bent, Urine is ſtopt, the Groins ſwell, and the Buttocks appear wrinkled. If it be diſlocated backwards, the Leg cannot be extended, that Thigh is ſhorter than the other, that Heel cannot touch the Ground, the Groin appears looſe, and the Head of the Bone ſticks out backwards.

Q. *How is this Diſlocation to be reduced?*

A. It is with *great difficulty* that it is done, eſpecially if it has been long out of place; however, if it be new and in tender Bodies, it may be reduced even with ſmall Extenſion ſometimes, if you ſuddenly bend the Thigh. (2.) Let an Aſſiſtant hold the Patient faſt by the Armpits, and another take hold of the Thigh above the Knee, with both his Hands, and make Extenſion, then do you with your Hands force in the Bone. (3.) Let a wooden Pin be drove into the Floor, then lay the Patient flat on his Back, with his Pin between his Legs, placed cloſe up to the head of the Bone, with a thick hard Boulſter between them; then make faſt the contrary Leg and Thigh, and endeavour to keep his Body very ſteady; then apply a ſtrong ſoft Roller ſeveral times about the

the diſlocated Thigh, to which a Cord or Pully muſt be fixed, with its other End at ſome diſtance; then an Aſſiſtant muſt pull ſtrongly upon the Cord, to make Extenſion, whilſt you manage the Bone to reduce it with your Hands.

Q. *How many ways may the Knee be diſlocated?*

A. Outward, inward, and backward.

Q. *What are the Signs of it?*

A. They are very evident. There is an unuſual Tumor on one ſide, and a Cavity on the other, Motion is weakened, and the Figure is depraved.

Q. *How is it to be reduced?*

A. Let two Aſſiſtants make Extenſion, one above, and the other below the Knee, near the Foot; and you muſt at the ſame time force the Bone into its place; then dreſs and roll, as has been directed.

Q. *How many ways may the* Ancle *be luxated?*

A. Inward, outward, forward, and backward.

Q. *What are the Signs of it?*

A. If it be diſlocated inward, the Sole of the Foot turns outward; and if diſlocated outward, it turns the contrary way: If forward, the broad Tendon of the Heel, called *Nervus Hectorius*, or *Tendo Achilles*, is very ſtiff and hard, and the Foot is leſs: If the Diſlocation be backwards, the Heel is almoſt hid, the Sole of the Foot ſeems bigger, and the Foot longer.

Q. *How is it to be reduced?*

A. By good Extenſion and Repoſition, and cured as other Luxations; only the Patient muſt there keep his Bed longer, (at leaſt thirty or forty Days) otherwiſe the Joint will ſlip out again upon every ſlight Occaſion; or at beſt, will be a long time weak, *&c.*

Q. *What*

Q. *What are thoſe which Surgeons call* Vulnerary Herbs?

A. Such as theſe; *Scabioſa, Sanicula, Auric. Muris, Tanaſet. Verban. Symphit. Hyperic. Biſtort. Tormentil. Vinc. per Vinc. Centaur. min. Borag. Marrub. Betonic. Valerian. Alchimil. Card. Ben. Flor. Cordial. Agrimon. Oſmund. Regal. Scordium, Ulmaria, Tuſſilag. Plantag. Burſa Paſtoris,* &c. Out of which, Drinks are to be made, as Occaſion offers.

CHAP. LIII.

Of Phlebotomy or Blood-Letting.

Q. *WHat are the Uſe and Effects of Phlebotomy?*

A. By it the Blood is altered both in Quantity and Quality.

Q. *What Inconveniences follow its too frequent Uſe?*

A. The Blood thereby becomes *more ſulphureous* and *leſs ſalt*, and ſo diſpoſes Men to be both *feveriſh* and *fat*.

Q. *That it gives Relief when Blood offends in* Quantity, *is plain: But how does Phlebotomy correct the Temperament of the Blood, when it offends in* Quality?

A. If any thing contrary to it be mixed with its Maſs, the Blood flowing out, upon a Vein being opened, carries much of that *foreign* Matter out with it, by which the reſt is more eaſily conquered and expelled; for the Orifice being once opened, Nature rallies all her Force to expel her Enemy; the fermenting Blood gathers together the

the *heterogeneous Particles*, and excludes them with the firſt Blood that flows; from whence it is, that in breathing a Vein, the *firſt Porringer* of it ſhall be mere *Putrefaction*; the *ſecond* ſomething *better*; and the *third* very good Blood, as every Surgeon may obſerve.

Q. *Does Bleeding reſtore the Blood to its right Temperament, when it is declining from it?*

A. Yes: for when its Maſs, by the *Sulphur* or *fixed Salt* is exalted, and degenerates into a *ſaline Sulphureouſneſs*; ſome of it being let out, a new Fermentation immediately ariſes, and the *Sulphur* and *fixed Salt* being overcome, the Spirits recover their Dominion. And for this Reaſon, Phlebotomy is by ſome adminiſtred as well in the *beginning* of a Conſumption, Scurvy, and Jaundice, as in a Fever; but Caution is to be uſed.

Q. *Do all Diſtempers indicate Phlebotomy?*

A. No; if the Mixture of the Blood becomes very bad, as in the Plague and malignant Fevers; or if the *Diſcraſy* of the Blood ſhall be ſuch, that the *Spirit*, *volatile Salt* and *Sulphur* ſhall be depreſſed, and the *terrene* or *aqueous Particles* predominate, then the Blood ought to be preſerved and not ſent out; wherefore in a [*confirmed*] *Conſumption*, *Cachexia*, *Dropſy*, &c. if you bleed, you murder the Patient.

Q. *From what Part of the Body is it beſt to draw Blood?*

A. According to the Laws of *Circulation*, it ſhould ſeem not much to matter from what Part it be taken, ſo it be but large enough; yet it equally flowing from all Parts to the *Vena Mediana* of the Arm, we generally open that; notwithſtanding, (according to common Practice, but how rational that is, I dare not determine) if it ought to be called back from the ſuperior Part of the Body

to the inferior, (as when the *Menſtrua* or Hemorrhoids are ſuppreſſed) it is thought moſt proper to bleed in the Foot.

Q. *At what time of the Diſeaſe is Phlebotomy to be celebrated?*

A. At the *Beginning* or *Increaſe*, but hardly in the *State* or *Declination.*

Q. *Why?*

A. Becauſe at that time Nature is *buſy*, endeavouring a *Criſis*, and the Blood very much ferments, ſo that Nature ought not to be diſturbed. Beſides, at the height of the Diſeaſe, if Nature is *Conquereſs*, ſhe does not want this Relief; and if ſhe be overcome, ſhe will not endure ſuch an Evacuation.

Q. *What time of the Day is beſt for the Operation?*

A. When there is a Neceſſity, it may be done at any Hour of the Day or Night; or (otherwiſe) a Morning is rather to be choſen, when the Stomach is empty, and the Veſſels emptied by Sweat, the Blood quiet, and appearing free from any *ſerous Filth*; or it may be deferred till the new Juice of things eaten be paſſed into the Blood, for the Veſſels being emptied, are both apt to ſnatch the *crude Chyle*, and what is diſagreeable to the Blood alſo, into themſelves.

Q. *What Quantity ought to be taken away?*

A. In a *burning Fever*, *Pleuriſy*, *Peripneumonia*, *Quinzy*, *Apoplexy*, and other *grand Diſeaſes*, that have their Original from a *Phlegmonick Incurſion* of the Blood, if it be not taken in a large Quantity, it does more harm than good: And on the contrary, in weak and tender Conſtitutions, and in *Dropſies* and *Cacochimia's*, it is not to be raſhly done; or if allowed for *particular Reaſons*, it muſt be in *ſmall Quantities.*

Q. *Is*

Q. *Is a* large *or* ſmall Orifice, *the moſt convenient?*

A. All ingenious Men give their Votes for a large one.

Q. *Why ſo?*

A. Becauſe if it flows with a ſmall Stream, or *Drop by Drop*, the Maſs of Blood fermenting, will *ſeparate into Parts*, and what is more *Spiritous* will burſt out, whilſt the thicker remains behind; beſides an *Ecchymoſis* and Tumor, is apt to remain after it.

Q. *Wherein lies the Danger in opening a Vein?*

A. In pricking an Artery or a Tendon.

Q. *How ſhall we know how to avoid it?*

A. In opening the *Jugular Vein*, or the *Vena Cephalica*, there is no Danger, except a Man is mad, and will plunge in his Lancet without Thought: But in the *Mediana* and *Baſilica* there is; for under or near the one lies a *Tendon*, and under the other an *Artery*.

Q. *What is a* Tendon?

A. It is a *ſimple Part*, diffuſed thro' the whole Body of a *Muſcle* lengthways, which in ſome part is united, and in ſome divided and ſtuffed with Fleſh; ſofter than a *Ligament*, and harder than a *Nerve*; it is the principal Part of a *Muſcle*, and the chief Inſtrument of Action.

Q. *What is an* Artery?

A. It is a *common Organ*, round, long, and hollow, conſiſting of a double Coat, proceeding from the Heart, fit to carry Blood and vital Spirits to all Parts.

Q. *What Signs follow a* Tendon *being pricked?*

A. Extreme Pain, a Flux of Humours, a Mortification, Fever, Ravings, and Convulſion.

Q. *What are the Signs of an* Artery *wounded?*

A. The Blood is very florid, it flies out impetuously, by Leaps and Spurts, and will not ſtop, nor ſuffer the Orifice to heal.

Q. *How are the Hurts of theſe remedied?*

A. With great difficulty; but as to the particular Cure, ſee Chap. 45. as to the Hurts of a *Tendon:* But if an *Artery* be punctur'd, Ligature is to be made above the Puncture, and the ſuperficial Parts carefully divided, to come at the *Artery*, and then by paſſing a Silver Hook or Needle under it, Ligature is to be made, both above and below, and divide the *Artery* at the Puncture, and the two Ends will in ſome time digeſt off, and the Wound may be cured as other Wounds. All other ways by Aſtringents, or by the actual or potential Cautery, are more dangerous, and precarious; tho' if *this* cannot be done, *thoſe* may, ſome of them, be attempted; for it muſt be done, one way or other, or the Patient will loſe his Life or Limb.

Q. *Why is ſo ſmall a thing as the Puncture of an* Artery *of ſuch difficult Cure, when that of a Vein heals of itſelf?*

A. Not that the Coats of an Artery are more Nervous than thoſe of a Vein, but becauſe an Artery (like the Heart it ſelf,) ought conſtantly to ſhake and beat; its Fibres repeating perpetual *Syſtole* and *Diaſtole:* wherefore a ſmall Puncture being made in its Pipe, by reaſon of the continual Motion of the Veſſel, and the *Efflux* of Blood, it remains very often incurable, or at beſt, of very difficult Cure.

CHAP.

CHAP. LIV.

Of Veſicatories or Bliſters.

Q. *HOW do Veſicatories, or Bliſtering Medicines operate?*

A. The manner how *potential Fires* operate, is beſt found out by enquiring how *actual Fire* does raiſe a Bliſter; of which it is obſervable, that the *fiery Particles*, being not too vehemently applied, penetrating the *Cuticula*, without Solution of Unity, enter under the *Cutis* it ſelf, where the Ends of the *Blood-bringing Veſſels*, and of the Nerves, and nervous Fibres, are terminated; and there do variouſly twiſt together theſe, altering their Poſition, and perverting the Structure of the whole Texture of the Skin; inſomuch that from the Veſſels being made angry, the watry Humour being mixed with fiery Particles, and therefore rejected both by the Blood and nervous Juice, is ſpewed out in great Quantities. Now this *Lympha*, becauſe it cannot paſs thro' the *Cuticula*, ſeparates it from the *Cutis*, and raiſes it into that *bladdery Form* which we call a *Bliſter*. So *Cantharides* being applied to a Part, and heated by its *Effluvia's*, and ſo provoked to *exert* their *poiſonous Energy*, do abundantly diſpatch out fiery Particles, which penetrate the *Cuticula* without any Laceration; they are thrown upon the Skin, where they firſt act upon the Spirits, and then upon the Humours and ſolid Parts; they diſſolve the Humours, *excite* painful Convulſions of the *Fibres*; and the Humours being diſſolved, are conſtrained to ſeparate into Parts; and its watry Part, which is tainted by

the venomous Particles of the *Cantharides*, is rejected by the other Juice, and *ſpewed* out between the *Cutis* and *Cuticula*, and ſo raiſes a Bliſter.

Q. *Why does Bliſtering often bring a Heat and Scalding in the Water, and ſometimes a* Dyſuria *or Strangury?*

A. The *ſerous Juice* cannot always bear all the ſharp Parts of the Medicine back the ſame way they entered, but ſometimes armed with ſome of its venomous Particles, flies back into the *Maſs of Blood*, and circulates with it, and is ejected thro' other *Emunctories*, and offends ſome tender Channels in its Paſſage; and amongſt the reſt, being ſeparated by the Kidneys, it hurts *them*, the Neck of the Bladder and urinary Paſſage, and corrodes the Parts, and ſo cauſes Pain in making Water, *&c.*

Q. *What gives Relief in that Caſe?*

A. Nothing better than a Decoction of Mallows, either in Milk or Water. Alſo *Camph.* ℈ſs. in *Conſerv. Cynosbat.* once in three Hours; which Method will effect a Cure, altho' the Cantharides have been taken inwardly.

Q. *In what Diſeaſes are* Veſicatories *profitable?*

A. In all *cutaneous Diſtempers*, alſo in malignant Fevers, Head-Ach, *Vertigo*, *Sopor*, in *Defluxions* of the Eyes, Noſe, Palate, or Lungs, *Convulſions*, *Epilepſy*, *Apoplexy*, *Lethargy*, &c.

Q. *In what Diſeaſes are they hurtful?*

A. Thoſe that are ſubject to the Stone, Gravel, or Strangury, find *Veſicatories* very *vexatious*; wherefore they are *there* to be forbore, unleſs a very urgent Neceſſity indicate the contrary.

Q. *Why is it an ill Sign when they do not riſe as uſual?*

A. Becauſe it ſhews that the *Animal* Spirits are dejected or diminiſhed to a great degree; and *all*

the

the Art of Man cannot make them operate on a dead Body; from whence it's plain, that when they do operate, they do it upon the Spirits. Wherefore when a good Veſicatory is applied, and no Bliſter ariſes, we have Reaſon to fear that they are *exhauſted*, and ſo conſequently *Death at hand*; yet *this Rule is not without its Exceptions, as I have ſometimes found.*

Q. *Our common way of ſtrowing the Powder of the Fly, over the common Plaiſter, ſometimes cauſes many ſmall Bliſters round about, and a very little or no Bliſter where it ought to be, to the vexation of the Patient, and Scandal of the Surgeon: Is there no way to compoſe a Veſicatory Plaiſter, that will ſtick, and do its Office, without ſtrowing it over with Powder of the Flies?*

A. Yes; I here give you a *Recipe* that never fails, if the Materials are good.

℞ *Reſin. clar.* ℔iiſs. *Cer. flav.* ʒvj. *Sev. pro Empl. Melilot.* ℔j. *Pic. Burgund.* ʒxx. *Pulv. Cantharid. ſelect.* ℔ij. Ms. *& fiat Empl.* S. A.

This you may depend on, without adding freſh Flies.

CHAP. LV.

Of Fontanels or Iſſues.

Q. *IN what Parts are Iſſues generally ordered to be made?*

A. If it be for a general Evacuation of Humours from the whole Body, let it be made in the *Arm*; or if it be for *Revulſion* from ſome particular Member, make it *far diſtant* from the *Part affected*;

or if it be for *Evacuation* from ſome particular Member, make it near the Part affected.

Q. *In what* particular Parts *of the Body, and for the Cure of what* Diſeaſes, *are Iſſues generally made?*

A. Some for evacuating Humours out of the Brain, preſcribe one on the *Coronal Suture*; or in the fore-part of the Head over the *Sagittal Suture*; or in the hinder-part of the Head about the beginning of the *Lambdoides:* ſome make it in the *Nape* of the Neck; ſome on either ſide the *Spine*, or between the Shoulders, or behind the Ears. Iſſues in the *Back* are accounted helpful in *Gouts*, *Stone*, and *Cholick*, by evacuating the Matter that feeds them; thoſe between the Shoulders on the Arm and Thigh, help *pectoral Diſeaſes;* and (they ſay) one made *between* the *Ribs*, helps a *Conſumption:* they are made in the *Groin* for Weakneſs of the Loins, and to cure *rebellious Sciatica's.* Sometimes they are made on the Thigh; but it is far better to make them on the inſide of the Leg, a little below the Knee.

Q. *In what Part of the Member is an Iſſue moſt ſafely cut?*

A. Not in the Body of a *Muſcle*, but in the diſtance between them, becauſe of the *Tendons*, which the Pea preſſing upon, may cauſe Pain, Inflammation, Fever, and worſe Accidents; wherefore let it be made clear of all large Veſſels and *Tendons.*

Q. *How are they to be made?*

A. Either by *Inciſion*, or *Cauſtick*, about both which it is needleſs to ſay any thing, the Operation is ſo common.

Q. *In what Diſeaſes do they principally prevail?*

A. In almoſt *every* Diſeaſe in the *Head*, outward or inward; *Convulſion, ſore Eyes, King's-Evil, Head-Ach, Cramp, Cough*, and *conſumptive Spitting*, an

an *Aſthma*, and in *Hypochondriac*, *Hyſteric* and *Cachectical* Caſes.

Q. *Suppoſe an Inflammation ſeizes it, how is it to be got off?*

A. By emollient Fomentations and Cataplaſms, ſuch as are before preſcribed; alſo evacuate by bleeding and purging, and keep the Patient to a ſlender Diet.

Q. *But if it runs too much, a* thin, ſtinking, diſcoloured, ichorous Matter, *how is this to be remedied?*

A. Let the Patient uſe a *regular Courſe* of Diet, without any Exceſs; let him avoid ſmall Wines, and Cyder, and all *acid Liquors*; let the Iſſue be kept *very clean*, and dreſſed twice a day.

Q. *But what if it tends to Putrefaction?*

A. Then in the room of a Pea, make a *Pill* of *Virgins Wax*, incorporated *cum Santal. Rub. & Virid. Æris*, and put it in, and uſe a Fomentation twice a Day, *&c.* or diſſolve *Vit. Rom.* ʒj. *in Aq. Font.* ʒviij. in which put a quantity of common Peas, and let them lie a Night, then take them out, and dry them well, and uſe them as other Peas; and theſe (as I am told) are much uſed in our Hoſpitals, at this day.

Q. *But if it grows dry, and will not run, what will you do?*

A. Then I would uſe a *Pea* armed with *Epiſpaſtick Plaiſter*; or *Peas* of *Box*; or of *Hermodactils* alone, which is excellent.

Q. *What Humours do they evacuate?*

A. All thoſe gathered within the Pores of the Skin, or Glands, are brought thither by the *Arteries* or *Nerves*, have their Conflux to Iſſues, and not only ſo, but the *ſerous Recrements* under the Skin, which are wont to be transferr'd, or creep between the *Interſtices of the Muſcles*, or Membranes

branes from place to place, have their Paſſage out at the Fontanel alſo.

Q. *Here has been a great Noiſe about Dr.* C——ch's *vulnerary Powder, which ſtops all Hemorrhages, and cures Wounds almoſt miraculouſly: Alſo the famous Stiptick Water, prepared by our great Oculiſt, Sir* Neither-Write-nor-READ: *And the celebrated Salt of Lemons. Pray what is your Opinion of them, and how do you think they are prepared?*

A. As to the vulnerary Powder, it is certainly a very good Medicine; and according to the following *Recipe* I have prepared it, and find it even the ſame with the Original: And which I ſhall here communicate.

℞ *Limatur. Martis, q. v. affunde Ol. Vitriol. ad trium digitorum ſupereminentiam, poſt Ebullitionem filtretur. Hujus Olei p.* 1. *Sacc. Saturni. p.* 2. *ſimul ad ſiccitat. evaporentur; pulv. qui relict. eſt, Spir. Vin. Rect. deflagrentur, & deinde ſervetur ad uſum.*

The Uſe and its wonderful Effects may be found in the Doctor's printed Book.

As to the *Stiptick*, I take it to be but a very indifferent Medicine; but ſuch as it is, I here ſhall communicate the Preſcription, being very ſure, that it is the ſame with the Original, as any Perſon may find by comparing them together. *viz.*

℞ *Aq. Font. Cong.* j. *Alum. com.* ℔j. *Aloes opt.* ℥j. *Cochinel. pulv. ſubtiliſſ.* ʒj. *coq. Sem. Hor. & filtretur.*

This Medicine may be of uſe inwardly, to reſtrain Fluxes of Blood, either by Urine or otherwiſe; but that it is of ſuch external uſe as the Gazette has formerly made us believe, no wiſe Man can ſuppoſe.

As

As to the Salt of Lemons, every Chymiſt knows, that Lemons afford ſo little Salt, that the very Pretence of ſelling it at a moderate Price, ſhews it to be a mere Trick. However, what is called the Purging Salt of Lemons, I here give you the *Recipe* of; and is certainly a pretty Cathartick.

℞ *Tart. vitriolat.* ℔j. *Reſin. Jalap.* ʒij. *Spir. vel Eſſentiæ Limon.* ʒſs. *miſce* S. A. Powder what is to be powdered; and mix them with the Spirit, or Eſſence, and keep them in a cloſe Box from Air. Doſe ʒſs. or ϑij. *plus minus.*

The End of the Chirurgical Part.

CHAP.

CHAP. LVI.

Of the moſt Principal Things neceſſary to be firſt known and underſtood in Anatomy, by every young Surgeon.

Q. *What is* Anatomy?

A. It is an artificial Diſſection of the Body, in order to know its Parts; and is divided into *Oſteology* and *Sarcology.*

Q. *What is* Oſteology?

A. It is that part of it which treats of the Bones, Cartilages, *&c.*

Q. *What is* Sarcology?

A. It is that part of it which treats of the Fleſh and the ſoft Parts; and is divided into *Splanchnology, Myology,* and *Angeiology.*

Q. *What is* Splanchnology?

A. It is that part which deſcribes the internal Parts, eſpecially the *Viſcera.*

Q. *What is* Myology?

A. It is a Deſcription of the Muſcles.

Q. *What is* Angeiology?

A. A Deſcription of the Nerves, Veins, Arteries and Lymphaduct Veſſels.

Q. *What is a Bone?*

A. It is a *ſimilar* Part, dry, cold, hard, inflexible and inſenſible, giving Strength and Form to the whole Body.

Q. *What is a* Cartilage *or* Griſtle?

A. It is a ſimilar Part, cold, dry, flexible, *but inſenſible,* and not ſo hard as a Bone, except by Age it degenerates; it has neither Membrane, Nerve,

Nerve, Cavity, nor Marrow; but they have a *Mucoſity* that preſerves them flexible: their uſe is, to cover or line the Bones in their Articulations, for their eaſier Motion.

Q. *What is a Nerve?*

A. They are the Organs of Senſe, long, round, white Bodies, covered with two Membranes, made of the *Dura* and *Pia Mater*, compoſed of Fibres, ſpringing from the Cortical Part of the Brain and *Cerebellum.*

Q. *What is a Tendon?*

A. It is a ſimilar Part, of a *peculiar kind*, diffuſed through the whole Body of a Muſcle *lengthways*, which in ſome part is united, and in ſome divided and filled with Fleſh, but moſtly poſſeſſing the Head and Tail of the Muſcle, yet only in ſuch as have Bones to move. It is ſofter than a Ligament, and harder than a Nerve; or *it is a Prolongation of the Fibres freed from the Parenchyma, and cloathed with the inveſting Membrane of the Muſcles.*

Q. *What is a Muſcle?*

A. It is an *Organical Part*, and is a Texture of Fibres, conſiſting of Nerves, Arteries, Veins, and Lymphatick Veſſels, and is the Author of voluntary Motion. It is called Μῦς, a Mouſe; either becauſe it reſembles a flea'd Mouſe, or elſe from Μύω, to contract, which is the Action of a Muſcle.

Q. *What are the Arteries?*

A. They are long, round, hollow Veſſels, conſiſting of four Coats, commencing from the left Ventricle of the Heart, where they receive the Blood that they diſtribute to all the Parts of the Body.

Q. *What are the Veins?*

A. They are Membranous Conduits, consisting of four Coats, which receive the Blood from all Parts of the Body, in order to convey it back to the Heart.

Q. *What is a Ligament?*

A. It is a solid and white Substance, softer than a Gristle, and harder than a Nerve; being of a middle Nature between a Cartilage and a Membrane: its use is to tie the Parts of the Body together, chiefly the Bones.

Q. *What is a* Fibre?

A. It is a Body like a Thread; slender, *tenacious* and *irritable*, made for the sake of Strength and Motion.

Q. *How many Bones are there in the whole Body?*

A. Our Moderns *generally* reckon 249.

Q. *As how?*

A. In the Cranium ——— — 14
In the Face (reckoning the *Os Hyoides*) — 46
In the Trunk — — — 67
viz. In the Spine thirty two, in the Breast twenty nine, and the six *Ossa Innominata*, *viz.* the two *Ischia*, the two *Ilia*, and the *Ossa Pubis*.
In the Arms and Hands ——— — 62
In the Legs and Feet ——— —— 60

In all 249

Q. *How are the Bones joined together?*

A. Either by Articulation or *Symphysis*.

Q. *What is Articulation?*

A. It is the natural Conjunction of two Bones touching one another by their Extremities; there are two kinds of it, *viz.* *Diarthrosis* and *Synarthrosis*.

Q. *What*

Q. *What is* Diarthrosis?

A. It is an Articulation, in which the Motion is manifest; and is divided into (1.) *Enarthrosis.* (2.) *Arthrodia.* (3.) *Ginglimus.*

Q. *What are they?*

A. Enarthrosis is when a large and long Head is received into a deep Cavity, as the Head of the *Os Femoris* into the Cavity of the *Os Innominatum. Arthrodia* is when a superficial Cavity receives a flat Head, as when the Head of the *Humerus* is received into the *Glenoide Cavity* of the *Scapula*; or the Heads of the *Metacarpus* or *Metatarsus* into the Cavities of the first *Phalanx*, or rank of the Bones of the Fingers, *&c. Ginglimus* is an Articulation in which two Bones do mutually receive one another, as the Bone of the *Carpus* which is received into that of the *Os Cubiti*, and the *Os Cubiti* into that of the *Carpus*.

Q. *What is* Synarthrosis?

A. It is an Articulation so strong and firm, that it has no distinct Motion; and is divided into *Sutura*, *Harmonia*, and *Gomphosis.*

Q. *What are they?*

A. Sutura or Suture, is when two Bones are joined together, like the Teeth of two Saws; and this is only in Bones of the Scull. *Harmonia* is an Articulation, wherein the Bones are joined in a *simple streight Line*, or a *Circular*; as the Bones of the Face, Nose, and Palate. *Gomphosis* is a compact Articulation, when one Bone is sunk or driven into another, like a Nail into a Piece of Wood; and thus the Teeth are fastned into their Sockets.

Q. *What is* Symphysis?

A. It is either with some intermediate Substance, or without it; that without it, is like a Tree

Tree and its Graft: and thus Nature by hardening the Bones of the lower Jaw, and the *Epiphyſis* belonging to it, does ſo join them, that they make one continu'd Body. *Symphyſis* with ſome intervening Body, is divided into, (1.) *Synneuroſis.* (2.) *Syſarcoſis.* (3.) *Synchondroſis.*

Q. *What are they?*

A. Synneuroſis, is when Bones are united by means of intervening Ligaments, as in the Articulation of the *Rotula* with the *Tibia*. *Syſarcoſis*, is when Bones are joined by means of Fleſh, as the *Os Hyoides* with the adjacent Parts, *&c.* *Synchondroſis*, is when Bones are united by a Cartilage, as the two Bones of the *Os Pubis*, *&c.*

Q. *Are there no other Kinds of Articulation?*

A. Yes; the Articulation of the Ribs with the *Vertebræ* of the Back, and the Bones of the *Carpus* and *Tarſus*, one amongſt another, and that is called *Amphiarthroſis*; and there are ſome others of leſſer moment, which I ſhall omit for Brevity's ſake.

Q. *What is an* Apophyſis *of a Bone?*

A. It is a Protuberance, which riſes on the Superficies of the Bone, with which it has the very ſame Continuity; and ſuch is the Prominence you ſee on the *Os Petroſum*, called *Apophyſis Maſtoides.*

Q. *What is an* Epiphyſis *of a Bone?*

A. It is an Appendage, or additional Bone, joined to the principal by a ſimple Contiguity; and ſuch is the Prominence you ſee on the *Os Tarſi*: Its uſe is, (1.) to ſtrengthen the Articulation; and (2.) to inſert divers Muſcles and Ligaments.

Q. *Has every Bone its* Epiphyſis?

A. No;

A. No; the lower Mandible has none of them, the Ribs have each of them one; the Bone of the Leg and of the Arm have each of them two; thoſe of the *Os Ilium* three; thoſe of the *Femur*, four; and each *Vertebra* five of them: in Infants they are Cartilaginous, but harden as Years advance, till about the 20th Year they convert into Bone.

Q. *How are the Bones nouriſhed?*

A. By Blood; though the Marrow does ſerve to moiſten them, as the Fat does other Parts; they all contain a Marrow, yet they want Senſe, though they are all (except the Teeth) covered with their *Perioſteum*, which is very ſenſible, being a thin, *nervous Membrane.*

Q. *What is the Spine?*

A. It contains all the Bones from the firſt *Vertebra* of the Neck (called *Atlas*) unto the *Coccyx* or Rump-Bone.

Q. *How are the* Vertebræ *divided?*

A. The Neck has ſeven, the Back twelve, and the Loins five; in all twenty four.

Q. *How many Ribs are there in the Body?*

A. They are in Number twenty four, *viz.* twelve on each ſide; the ſeven Superior are called *true*, and the five Inferior *falſe*, or ſhort Ribs.

Q. *How many Teeth has a full-grown Perſon?*

A. Sixteen in each Jaw, in all thirty two; and conſiſt of three ſorts, *viz.* (1.) *Inciſores* or Cutters, and are thoſe which we call the *Foreteeth*; each Jaw has four of them, and they have but one *Phang* a-piece. (2.) *Canini*, or Dog-Teeth, they are in number four; in each Jaw there are two, at each ſide of the Cutters one; they are otherwiſe called *Eye-Teeth*, and have but ſingle *Phangs*. (3.) *Molares* or Grinders, becauſe like Mill-Stones they grind the Meat; they are in number twenty,

(*viz.*) five on each ſide of each Jaw, the two foremoſt have but two *Phangs* at moſt, but the others commonly three or four.

Q. *Name the Sutures?*

A. They are the *Coronal*, *Lambdoidal*, and *Sagittal*. The *Coronal* Suture extends from one Temple to another, and joins the *Os Frontis* with the two Bones of the *Sinciput* or fore-part of the Head. The *Lambdoidal* Suture is ſo called, becauſe it is made like the Greek Letter Λ; it is oppoſite to the former, and unites the *Os Occipitis* with the two Bones of the *Sinciput* behind. The *Sagittal* Suture is placed on the ſuperior Part of the Head, and goes from the *Coronal* to the *Lambdoidal*.

Q. *How many ſorts of Hurts, is the Scull ſubject to?*

A. (1.) *Depreſſio*, a Depreſſion. } Called Compound Fractures in *Cranio*.

(2.) *Concameratio*, a Vaulting. } Called Compound Fractures in *Cranio*.

(3.) *Exciſio*, a Part cut away. } Called Compound Fractures in *Cranio*.

(4.) *Fractura*, a Fracture in a ſtrict Senſe, where both Tables are broke.

(5.) *Sedes*, or the Print of the Weapon wounding. } Commonly termed Simple Fractures in *Cranio*.

(6.) *Rima*, *Fiſſura*, or Chink. } Commonly termed Simple Fractures in *Cranio*.

(7.) *Contuſio*, a Contuſion. } Commonly termed Simple Fractures in *Cranio*.

(8.) *Diſſolution of a Suture*, (*viz.*) when it gapes or ſeparates.

(9.) *Colliſion* of a *Suture*, (*viz.*) a Contuſion of its Brims.

(10.) *Contra Fiſſura*, a Fiſſure in the oppoſite Part to that where the Blow was received.

Q. *What*

Q. *What are the* Ulna *and* Radius, Tibia *and* Fibula?

A. They are the greater and leſſer Bones, or *Foſſiles* of the Arm and Leg.

Q. *What is the* Carpus?

A. It conſiſts of eight Bones, and is ſituated between the lower Articulation of the *Ulna* and *Metacarpus.*

Q. *What is the* Metacarpus?

A. It is that Part which is between the *Carpus* or Wriſt, and Fingers, and is compoſed of four Bones.

Q. *What are the Bones which make the* Tarſus *or Inſtep?*

A. In conſiſts of ſeven Bones, *(viz.)* the *Aſtragalus, Calcaneum, Naviculare, Cuboides,* and the three *Cuneiformia.*

The *Aſtragalus* (or *Talus*) has in its upper part a convex Head, which is articulated with the *Tibia* and *Fibula* by *Ginglymus*; its fore-part, which is alſo convex, is received into the *Sinus* of the *Os Naviculare:* Below, towards the hind-part of the under ſide, it has a moderately large *Sinus,* which receives the upper and hinder-part of the *Os Calcis.*

The *Os Calcaneus,* or *Calcis,* or the Heel-Bone, lies under the *Aſtragalus,* to which it is articulated by *Ginglymus:* Behind, it has a large Protuberance, which forms the Heel, and into which the *Tendo Achillis,* or large Tendon of the Heel, is inſerted.

The *Os Naviculare* lies between the *Aſtragalus* and the three *Oſſa Cuneiformia,* and has its Name from the reſemblance it bears to a Ship, and is therefore ſometimes called *Cymbiforme,* from its likeneſs to a Boat: Behind, it has a large *Sinus*; and

before, it is convex, distinguished into three Heads.

The *Cuboides*, or *Os Cubiforme*, is joined *behind*, to the *Os Calcis*; *before*, to the two outer Bones of the *Metatarsus*; and on its *inside*, to the third *Os Cuneiforme*.

The *Ossa Cuneiformia* are so called from their Wedge-like Shape, and lie all three at the side of one another: The *inmost* is the *largest*, and the *middlemost* is the *least*; their *upper-side* is *convex*, and their *under*, *concave*; by that means hindering the Muscles and Tendons of the Feet from harm, when we go.

Q. *What is the* Metatarsus?

A. All that part between the Instep and Toes, and consists of five Bones.

Q. *What is properly called the* Thorax.

A. The *Thorax* or Breast, is the whole Cavity that reaches from the *Claviculæ* or Collar-Bones, to the *Diaphragma*, or Midriff; it contains the Heart, Lungs, part of the Windpipe and Gullet, the *Arteria Magna*, *Vena Cava*, and *Ductus Thoracicus*.

Q. *How many Nerves are there in the whole Body?*

A. They are counted by Pairs, and in the whole there are forty Pair of them; ten Pair of which take their rise from the *Medulla Oblongata*; and thirty from the *Medulla Spinalis*, which thirty make their egress by sixty Perforations in the Spaces between the *Vertebræ*; and though all have their exquisite Sense communicated to them from the Brain, yet the Substance of the Brain itself is *wholly insensible*, which is very amazing?

Q. *What is the* Cerebellum;

A. It

A. It is a marrowy windy Body, that lies under the Brain, in the lower and hinder-part of the Head; its lower part is continuous with the Brain, but the upper is ſever'd from it by the Folds of the *Dura Mater.*

Q. *How many Muſcles are there in the whole Body?*

A. They are in number four hundred and thirty four; thus, (*viz.*) in the Forehead two, in the *Occiput* two, the Eye-lids ſix, the Eyes twelve, the Noſe ſeven, the external Ears eight, the internal Ears four, the Lips thirteen, the Tongue eight, the *Uvula* four, the *Larynx* fourteen, the *Pharynx* ſeven, the *Os Hyoides* ten, the lower Jaw twelve, the Head fourteen, the Neck eight, the Shoulder-Blades eight, the Arms or Shoulder-Bones eighteen, the *Ulna* twelve, the *Radii* eight, the Wriſts twelve, the Fingers forty eight, Reſpiration fifty ſeven, the Loins ſix, the Abdomen ten, the Teſticles two, the Bladder one, the Yard four, the *Anus* three, the Thighs thirty, the Legs twenty two, the Feet eighteen, the Toes forty four.

Q. *What is the* Abdomen?

A. It is all that Cavity which extends from the Diaphragma to the *Os Pubis.*

Q. *What are the five Pair of Muſcles of the Abdomen called?*

A. (1.) *Oblique Deſcendens.* (2.) *Oblique Aſcendens.* (3.) *Rectum.* (4.) *Pyramidalis.* (5.) *Tranſverſalis.*

Q. *What is the* Linea Alba?

A. It is a concourſe of all the *Aponeuroſes* of the Muſcles of the Abdomen. It extends from the *Cartilago enſiformis* or *Xiphoides*, to the *Os Pubis.*

Q. *What are the Number and Names of the Inteſtines or Guts?*

A. They conſiſt of three Coats, and are about ſeven times the length of the Perſon; they are in Anatomy divided into ſix, (*viz.*) three ſmall, and three great ones; the ſmall are the *Duodenum*, *Jejunum*, and *Ilium*; the great ones are the *Cæcum*, *Colon*, and *Rectum*.

Q. *What is the* Epigaſtrick Region?

A. It is the ſuperior part of the *Abdomen*; it begins at the *Cartilago Enſiformis*, and ends two Fingers breadth above the Navel; its middle part is called *Epigaſtrium*, which incloſes the ſmall Lobe of the Liver, part of the Stomach, with its inferior Orifice, and the middle part of the *Colon*.

Q. *What are the* Hypocondria?

A. The two ſides of the *Epigaſtrick Region*, are called the right and left Hypocondrium; the right contains the great Lobe of the Liver and Gall-bladder, and the left contains the greateſt part of the Stomach and Spleen.

Q. *Which is the* Umbilical Region?

A. It begins two Fingers breadth above the Navel, and ends two Fingers breadth below it; its middle part is called the Navel, and its two ſides the *Loins*; the Navel includes the greateſt part of the *Jejunum* and *Meſentery*; the right Loin contains the right Kidney, the *Cæcum*, part of the *Jejunum* and *Colon*, and the left Loin the left Kidney, and ſome part of the *Colon* and *Jejunum*.

Q. *Which is the* Hypogaſtrick Region?

A. It is called *Hypogaſtrium*; its Sides are the *Ilia* or Flanks; under it we find the *Rectum*, Bladder, and Matrix: the *Ilia* are ſo called, becauſe they contain the Gut *Ileum*; the *Hypogaſtrium* is divided into the *Pubis* and Groins.

Q. *What*

Q. *What are the* Venæ Lacteæ?

A. They are ſlender *pellucid* Veſſels, having but one Coat, ſent in vaſt Numbers thro' the *Meſentery*; their uſe is to carry the *Chyle* from the ſmall Guts to the veſicular Glands of the *Meſentery*, and ſo to the *Receptaculum Chyli:* they are of two ſorts, and called *primi & ſecundi generis.*

Q. *What is the* Meſentery?

A. It is a membranous Part, which ties moſt of the Guts together, and keeps them from *tangling*; it has two proper, and one common Membrane; it contains Veins, Arteries, Nerves, *Lymphaducts*, Glands, and *Venæ Lacteæ.*

Q. *What is the* Lympha?

A. It is a *fermentatious* Liquor, ſeparated from the ſerous part of the Blood in the *conglobate Glands*, impregnated with *volatile Salt*, and *ſulphureous Particles*; which, when brought to the *Vaſa Chyliſera*, makes the *Chyle* thinner, and apt to dilate eaſily in the Heart; and the ſame it does by the venous Blood in the Veins, if it is too thick. It differs from a *Serum*; for if ſet in a Spoon in the cool, it will turn to a Jelly. The *Lymphaducts* are Veſſels long, hollow, ſmall and knotty, having many Valves, which ſuffer the *Lympha* to paſs to the *Chyliferous* Veſſels, (and ſome Veins) but hinder its return.

Q. *What is the* Larynx?

A. It is the Head of the Windpipe.

Q. *What is the* Pharynx?

A. Only the Orifice of the *Oeſophagus*, dilated to a great Extent.

Q. *What is the* Epiglottis?

A. It is the fifth Cartilage of the *Larynx*, and ſerves like a Trap-Door to keep any thing from falling into it.

Q. *What are the* Spinalis Medulla, *and* Spinalis Oblongata?

A. The *Spinalis Medulla*, or Spinal Marrow, is only a Production and Continuation of the Brain; 'tis divided into two parts, one of which is lodged in the Brain, and is called *Medulla Oblongata*, and the other contained in the *Vertebræ*, which is properly called *Medulla Spinalis*. The *Medulla Oblongata* is of a Subſtance harder than the Brain; and the *Medulla Spinalis* more ſolid than *that*; being a Rope of *Nervous Fibres*, diſtributed to all the Parts of the Body, and gives them exquiſite Senſe, and Motion; it has three Coats, one of which proceeds from the *Dura*, and the other from the *Pia Mater.*

Q. *Why has the Heart a Pulſation, and why is the Blood red?*

A. No (ſatisfactory) Reaſon, that we know of, can be given for either of them, but the Will of the great Creator. Not but Attempts have been made by Men of ready Inventions; which may be ſeen in a Treatiſe of ours, lately publiſhed, called, *Mechanical Eſſays, explicating the Animal Oeconomy*, &c. a Book of great uſe to all young Practitioners. Printed for *A. Betteſworth*, at the *Red-Lyon in Paternoſter-Row, London.*

Q. *How is the Body nouriſhed?*

A. By Blood; which Blood is thus made: The Food after being chewed in the Mouth, and mixed with the *Saliva* or Spittle, paſſes through the *Oeſophagus* or Gullet, into the Stomach; the inner Coats of both which, being full of ſmall Glands, are continually ſupplying the Stomach with an *Acid*, which meeting with the pounded Food, makes a ſort of ferment, and makes it become more liquid, and perfectly *uniform*; which being equally on all ſides ſqueezed by the Stomach, paſſes

paſſes through the *Pylorus* into the Inteſtines; where (in the *Jejunum* and *Duodenum*) it mixes with the *Bile* and *Pancreatick Juice*, by means of the *Ductus Cholidochus* and *Ductus Pancreaticus*, which open into them for the ſame purpoſe; *theſe* here meeting with the *Aliment*, perfect the Liquefaction, and then it makes its way thro' the other Inteſtines, where the groſſer Part is evacuated by Stool, and the moſt refined Part called *Chyle*, enters the Orifices of the firſt *Venæ Lacteæ*, which are more numerous in the *Jejunum*, than in any other Inteſtine, and ſpread themſelves all over the *Meſentery*, in whoſe *Baſis* there are Glands, in which theſe Veins terminate; and the *Chyle* is received by the ſecond ſort of the *Venæ Lacteæ*, and conveyed to the *Receptaculum Chyli*, from whence it riſes through the *Ductus Thoracicus* to the left *Subclavian Vein*, and ſo glides on to the deſcending Branch of the *Vena Cava*; after that to the right *Auricle*, and then to the right *Ventricle* of the Heart. Then by its *Syſtole* or Contraction, it is forced thence into the Lungs, and then deſcends into the left *Auricle* of the Heart; whence it is expelled into the *Aorta*, or great Artery, and ſo paſſes along with the Blood, by the Arteries, through the whole Body, and returns again with it by the Veins to the Heart, and undergoes many Circulations before it is turned into Blood; but by the *vital Spirits* and other *active Principles* of the Blood, it receives *ſome Alteration* every time it circulates; till at length all its Maſs, (that is capable of being turned into Blood) is *ſanguified*; and what is *not*, is diſcharged by Urine, Stool, Sweat, *&c.* The Blood being thus made, the Body is nouriſhed by it; for there is that diverſity of figure, both in the Particles of the Blood, and Pores of each part, that in the Circulation every Particle ſticks

in

in its proper *Pore*, in order to pass into the Nourishment of *that part*, which is of the same Nature with its self; (*viz.*) the Salt and *Sulphureous* Particles equally mixt, go to nourish the fleshy or musculous Parts; the Oily and *Sulphureous* to the Fat; the Salt and *Tartareous* to the Bones, *&c.*

Q. *How much Blood is supposed to be in the whole Body?*

A. According to some Authors, fifteen or twenty; and to others about twenty four Pounds; which circulates six or seven times in an Hour.

Q. *Why is the* Arterial *Blood more florid than the* Venal?

A. That Colour is merely owing to the mixture of the Particles of the Air with the Blood in the Lungs; and even the Venal Blood a while exposed to the Air, acquires (contrary to its Nature) a florid Colour also, most commonly.

Q. *What is* Saliva *or Spittle?*

A. It is made of the Blood which passes thro' the *Parotid Glands*, placed behind the Ears, and the *Maxillary Glands*, seated under the lower *Maxilla*, between the *Larynx* and the *Os Hyoides*, and is pressed out thence into the *Ductus Salivares*, which open into the Mouth, under the Tip of the Tongue, upon the two sides of the *Frænum*, by the lower Fore-Teeth. These *Ductus's* are four in number.

Q. *How much* Choler *is supposed to be in the Body?*

A. About two Pounds; but it is very uncertain.

Q. *How does it cause the Jaundice?*

A. Either when through the want of a *convenient Ferment*, it is not separated from the Blood: or when the Neck of the *Vesica Fellis* is stopped, that none

none can pass out of it into the Intestines. But, the Reader may find greater Satisfaction in my *Mechanical Essays on the Animal Oeconomy.*

Q. *What is Hunger and Thirst?*

A. Hunger is caused by an *Acid*, which continually trickles down the Cavity of the Stomach from its own Glands, and those of the *Oesophagus*, which when the Stomach is empty, it finds nothing to prey upon, therefore pricks upon the Membranes of the Stomach, and *so* causes a desire of Food; and when there rises up some Vapour, which heats its superior Orifice, it inclines us to cool it with something; and this is what is called *Thirst.*

Q. *How is Milk produced?*

A. Milk consists of a middle Nature between Blood and *Chyle*; being not so thick as the one, nor so *serous* as the other, and is thus made: When the *Chyle* has mixed with the Blood (as has been said) and is got as far as the *Aorta*, that part of it which is most *serous*, is conveyed by the *emulgent Artery*, and strained into the Kidneys, by the papillary Bodies, to be sent from thence, by the *Ureters* to the Bladder, and so voided by Urine, whilst that part that is most *milky*, is carried by the small Branches of the *Mammariæ*, to all the Glands of the Breast, into which the Secretion of it is made; where all its Particles being united, make up a *Body of Milk*, which is thrown by the Pipes of these Glands into the *common Cistern*, where it remains till the Child (by the *Tubuli* which run from the Cistern to the Nipple) draws it out. Vide *Mechanical Essays*, &c.

Q. *What is Smelling, and how is it performed?*

A. It is a *passive Quality* of the *Olfactory Nerves*, in receiving the Impression that *Odorous Bodies* make, by virtue of their Exhalations; thus,

viz. the little Atoms that exhale from *Odoriferous Bodies*, being carried by the Air to the Noſe, ſtrike upon its inner Membrane, and ſhake the ſmall Pipes of the *Olfactory Nerves*; upon which the ſubtle Matter with which they are filled, partaking of the ſame Motion, flies immediately to the *Corpora Striata*, where theſe Nerves take their riſe, and where the Soul perceives that this is an Impreſſion of an odoriferous Body. And this is what is called *Smelling*.

Q. *What is the Difference between* Conglobate *and* Conglomerate Glands?

A. Conglobate Glands are they which are undivided, being of one Subſtance and Compoſition, appear firm, and have an even ſmooth Surface. *Conglomerate Glands* are compoſed of ſeveral little Bodies, joined under one Membrane, ſuch as the *Pancreas*, *Salival Glands*, *Lachrymal Glands*, &c.

Q. *What is the* Os Hyoides?

A. It is ſeated at the Root of the Tongue, under the lower Jaw, and above the Larynx, and is ſhaped like the Greek Letter υ, whence it is called *Ypſiloides*; by its Gibbous Side it is joined to the Baſis of the Tongue, and into its *Concave*, it receives the *Epiglottis*.

Q. *What is its Uſe?*

A. It ſerves for the Inſertion of thoſe Muſcles that move the Tongue, and for keeping the Throat open till we ſwallow, and to keep open the Windpipe till we breathe and ſpeak.

Q. *What is the* Os Pubis?

A. This is what is called the *Share-Bone*, and is the third of the *Oſſa Innominata*, of which it is the lower, and inner, or fore-part.

Q. *What are the* Oſſa Innominata?

A. The

A. The *Os Ilium*, *Coxendix* and *Pubis*, joined to the *Os Sacrum* (through the Intervention of a Cartilage) by a ſtrong Ligament, which together frame the *Pelvis*, or Cavity, which contains the Bladder, Matrix, and part of the Inteſtines.

Q. *What is Hearing?*

A. It is a Senſe, whereby Sound is perceived from a trembling Motion of the external Air, beating upon the *Tympanum*, and ſo moving the internal Air with the Fibres of the Auditory Nerve, and communicated to the Brain.

Q. *What is the Tympanum?*

A. It is what is called the Drum of the Ear; and is a nervous, round, *pellucid* Membrane, of moſt exquiſite Senſe, ſeparating the outward from the inward Ear; and ſprings (according to *ſome*) from the *Pericranium*; to *others*, from the *Pia Mater*; to *others*, from the *Dura Mater*; and to *others*, from the ſofter Proceſs of the auditory Nerve expanded. When it is taken away, a Cavity appears on the inſide of it; in which are contained four little Bones that are moveable, and very much conduce to Hearing; *viz.* (1.) *Malleolus*, or the little Hammer. (2.) *Incus*, the Anvil. (3.) *Stapes*, the Stirrup. And, (4.) *Os Orbiculare*, ſo called from its round Shape. If by any Accident, the *Tympanum* is lacerated, the Hearing of that Ear is irrecoverably loſt; therefore let the young Surgeon be cautious *how*, or with *what*, he ſyringes an Ear; and be ſure to uſe an Ear-Syringe, and not one with a long Pipe, nor do it too *forcibly*, leſt he come off with juſt Shame and Scandal, and do ſuch Miſchief as he can never make Satisfaction for. As to what he ought to ſyringe an Ear with, in Deafneſs, *&c.*

warm

warm Water, in which is a Quantity of Canary, *Aq. Hungar.* or good Brandy, may ſerve as well as any thing.

Q. *What is Viſion or Sight?*

A. It is that Senſe whereby from the different Motion of different Rays, gathered in the *Cryſtalline* and *Vitreous* Humour, and ſtriking upon the *Tunica Retina*, viſible Objects are perceived.

Q. *How many Humours is the Eye compoſed of?*

A. Three, (*viz.*) Aqueous, Cryſtallinous, and Vitreous.

Q. *How are they ſituated?*

A. The Aqueous is outermoſt, and fills up that Space which is between the *Cornea* and Cryſtalline Humour before: If any thick Particles ſwim in it, then Flies, *&c.* ſeem to be flying before the Eyes; and if they yet grow thicker, ſo as to cauſe a Film, and this be ſpread before the hole of the *Pupilla*, it makes that Diſeaſe called a Cataract. The Cryſtalline Humour is placed between the *Aqueous* and *Vitreous*, not exactly in the middle of the Eye, but inclining rather *towards* its fore-part; it is more bright and ſolid than either of the other two. The Vitreous, ſo called from its likeneſs to melted Glaſs, is thicker than the Aqueous, and thinner than the Cryſtalline, and exceeds both in Quantity.

Q. *How doth Blood paſs out of the Arteries into the Veins?*

A. Either by *Anaſtomoſis*, or *Inoſculation*, (which is now, with Reaſon, not believed;) or elſe by the Capillary Arteries letting out their Blood into the Pores of the Subſtance of the Parts, on whoſe Nouriſhment part is ſpent, and the reſt imbibed by the Mouths of the Capillary Veins; and

and this is now the common received Opinion.

Q. *Which is the* Vena Saphæna ?

A. When the Iliacal Branches of the *Cava* are deſcended as far as the Thigh, they are called *Crurales*; and when paſt the Groins, are divided into ſix more, the firſt of which is the *Saphæna*, and which deſcends down the inſide the Thigh and Leg, between the Skin and *Membrana Carnoſa*, and generally appears turgid, on the inſide the Ankle, where it is opened with ſafety and ſucceſs, in Diſeaſes of the Matrix.

Q. *What is an Hair ?*

A. It is a ſmall Body, Thread-like, hard and flexible.

Q. *Of what Figure are they ?*

A. Generally four-ſquare, ſometimes triangular, ſeldom round, but always porous lengthways.

Q. *What are Nails on the Fingers and Toes ?*

A. They are a horny tranſparent Subſtance, coming neareſt to Bones, and are given for Defence, but are without Senſe; and both they, and the Hair, will grow after a Man is dead.

Q. *Of what Weight and Bigneſs is the Brain of a Man ?*

A. Some Men's weigh four or five Pounds, and are by *ſome* affirm'd to be as big again as that of an Ox.

Q. *And what is your Deſign in publiſhing this Book the fourth time ?*

A. The very ſame as it was the firſt, ſecond, and third; (which have given ſuch Satisfaction to the World, that they are all ſold off;) and that was, To ſerve my Generation; and to deliver

deliver that in a few Words, and pleaſant Method, that others have made myſterious Volumes of, to torture the young Reader's Pocket, and Memory to little Purpoſe.

——Si quid noviſti rectius iſtis,
Candidus imperti; ſi non, his utere mecum. Horat.

A N

APPENDIX:

CONTAINING

A Rational (tho' ſhort) Account of the VENEREAL DISEASE in every Stage of it.

With the True Method of Cure, and Management of a Patient under it.

Q. *THE Venereal Diſeaſe being ſo common, and there being ſuch a multitude of Pretenders to its Cure, and ſo many miſcarrying under their Hands, I beg you will favour me with your Thoughts about it.*

A. With all my heart; ask what Queſtions you pleaſe, only uſe Brevity.

Q. *Whence had it its Original?*

A. Some ſay from *France*, and from thence call it *Morbus Gallicus*; others from *Naples*: but it is of no great moment to know from whence it came, it is ſufficient for us that we know it is now in our own Country; nor will we contend about Words, and wrangle, whether the firſt Stage of it, attended with a Gleet, ſhould be called *Gonorrhœa*, or *Stillicidium*, or whether a Diſcharge at

 the

the Salival Glands, by the uſe of Mercury, be moſt proper to be called a *Salivation*, or a *Ptyaliſm*; but diſcourſe only of what is more material.

Q. *How many ways may a Perſon be infected with the Grand Pox?*

A. (1.) By impure Embraces, (2.) by a laſcivious Contact of the Genitals, (3.) from pocky Parents, (4.) by ſucking an infected Nurſe, (5.) by ſuckling an infected Infant, and (6.) it is not adviſeable to lie in Bed with a pocky Perſon, eſpecially for young and tender Bodies; but as to ſitting on the ſame Seat, putting on the ſame Glove, or wiping on the ſame Towel, there is no danger in any of them, and they are only ſham Pretences for ſome wicked Perſons to impoſe on their credulous Relations by.

Q. *What is the Nature of its Poiſon, and how is it to be accounted for?*

A. It would take up too much room to give you the Opinions of all that have wrote about it, and who, as they all differ one from another, cannot be all in the right, but may poſſibly be all in the wrong; and it being only a matter of Speculation, I ſhall not ſpend time here about it, but refer you to my *Mechanical Eſſays on the Animal Oeconomy*, a Book worth your buying.

Q. *How do you diſtinguiſh, of this Diſeaſe?*

A. The firſt Infection is commonly called a *Gonorrhœa* or ſimple running at the *Penis*, and the ſecond Infection is by way of Eminence named the POX; either proceeding at once from the impure Embraces of a pocky Perſon, or from a *Gonorrhœa* ill cured.

Q. *What is a* CORDEE?

A. It is a Conſtriction of the *Frænum*, whereby the *Penis* is pulled down (in the nature of a *Curve*,) when it is erected, cauſing exceeding Pain; and it commonly

commonly happens when the Patient awakes out of his Sleep.

Q. *How is it to be cured?*

A. Some adviſe to dip the Penis in cold Milk, or Water; whilſt others ſay that ſuch a Method is apt to ſhut the Pores, and pen up the Poiſon, and rather adviſe to dip Cloths in Oxycrate, and wrap them about the *Scrotum:* but the moſt effectual way is to give brisk Purges with Mercurials, and now and then a Doſe of *Turbith Mineral* to make Revulſion, and at proper times, Emulſions *cum Sale Prunel. Camphor.* &c.

Q. *What is a* Phimoſis, *and* Paraphimoſis?

A. The one is a *Conſtriction* of the Prepuce over the end of the *Glans*, ſo that it cannot be drawn back; and the other is a painful *Reſtricture* of it when it is drawn back behind the Neck of the *Glans*, ſo that it cannot be again brought over its end, to cover it.

Q. *How muſt I remedy this Miſchief?*

A. Foment it with a Decoction *ex Fol. Malv. Verbaſc. Summit. Centaur. Hyperic. Sem. Lini, Flor. Cham. Flor. Melilot. Sambuc.* &c. and if need be, thicken up ſome of the Ingredients with *Farin. Fabar.* into a Cataplaſm, and apply it warm, and purge with *Pil. ex Duobus* and *Calomel.* and between whiles make Revulſion with *Turbith Mineral*, &c.

Q. *What muſt be done in a* Dyſuria, *or Heat, Pain, and Difficulty of Urine?*

A. On the Days the Patient does not purge, give him plentifully of Emulſions, *ex quatuor Sem. Frigid. maj. cum Sem. Papaver. Syr. Altheæ*, &c. and with a Draught of it at Night (on the purging Days) *Syr. è Meconio* ℥j. or ℥vj. and inſtead of making the Emulſion of *Aq. Font.* make it of *Aq. Hordei*, in ℔ij. of which diſſolve ℥vj. of *Gum Arabic.* And if this does not do, mix with each

Doſe, *Salis Prunel.* 3ſs. and in ſome ſtubborn Caſes, or in a *Cordee*, or *Priapiſm*, add *Sacc. Saturni*, or *Camphor. gr.* v. or vj. or if the Emulſion cannot be had, a ſtrong *Decoct. Malvar.* will infallibly do it in three or four Days, drinking of it at leaſt two or ℔iij. a Day, as I know by forty Years happy Experience.

Q. *What is a Caruncle?*

A. It is a little Excreſcence of Fleſh, growing in the *Urethra*, cauſed by the corroding Gleet, paſſing thro' it, and lodging there. In a Clap of long ſtanding, or in one that is a conſequent of ſeveral, *one upon another*, or from one ill cured. The Patient that has them, commonly piſſeth in divers Streams, and ſometimes only by Drops, as in a Strangury, and with prodigious Pain; and if the *Ductus* is wholly ſtopt thereby, there muſt be ſpeedy Relief, or Death is the Conſequence, and that very quickly.

Q. *What muſt be done in this deplorable Caſe?*

A. By a Catheter Probe, or rather by a Wax Candle, made ſmall on purpoſe, and dipt in Oil, and paſſed gently into the *Urethra*, you may diſcover its Situation; but unleſs Life is in danger, you muſt not be too rough with it to force it thro' the *Caruncle*, but rather uſe a *medicated Candle*, to eat it off.

Q. *How is that to be done?*

A. Having a Piece of a very ſmall Wax Candle, of a fit length, ſcrape off the Wax at one end, and dip the ſame in a fit Mixture, to ſupply the place of the Wax ſcraped off. The Compoſition is to be either only very drying, or *Catheretick*; as *Pulv. Sabin. Alum. uſt. Præcipit. Rub. Lap. Calaminar. Vitriol. Calcinat. Merc. Sublimat.* &c. mixt with a due proportion of *Empl. Diacalcit. de Ceruſ.* or *è Mucilagin.* which may be found in Authors,

thors, differently proportioned: but for a *Specimen*, take only this; ℞ *Merc. Præcip. rub.* ʒij. *Lap. Calaminar.* ϑij. *Vitriol. Calcinat.* ϑj. *Empl. Diacalcit.* ʒ.ſs. *ad ignem liquefact. & fiat Cand. S. A.*

Paſs the medicated End of the Candle, ſo far into the *Urethra*, as to preſs gently upon the Caruncle; and being fixed cloſe there, turn the other End back, over the End of the *Prepuce* and *Glans*, and ſecure it there from ſlipping: and let the Patient drink as little as poſſible, to avoid making Water, for when he does, he muſt take out the Candle, and when he has done, put in another himſelf. Upon drawing forth the Candle, he may inject warm, a little *Aq. Hord.* or *Mucilag. è Sem. Cydonior.* to aſſuage the Heat and Pain. And let him follow this Method, until the Sloughs ſeparate and come away; and then to heal it, inject *Aq. Calcis*, or *Decoct. Cort. Granat. Balauſt.* &c. *cum Syr. Roſ. Sicc.* warm.

Q. *What are* Chankres, *or (as they are commonly called) Shankers?*

A. They are Venereal Ulcers (moſt commonly) on the *Prepuce*, and *Glans*.

Q. *How are they to be cured?*

A. As to Externals, (if they are of a mild kind) *Præcipit. Rub.* ſtrowed on them, a Digeſtive over that, and kept conveniently on, often do the Buſineſs; as does ſometimes *Argent. Viv.* kill'd (as it is called) with *Tereb. Ven.* and apply'd on Pledgets; but if theſe fail, the *Chankres* may be touched with *Lac. Sublimat.* and ſometimes a light Touch of the Lunar Cauſtick; but if nothing will do, fume them with *Cinnab. factit.* ʒj. on an Iron Pad, three parts red-hot, twice a day, and purge well with *Pil. ex Duob. gr.* xxv. *& Calomel. gr.* xii. and for two or three times, (to cauſe Revulſion) and at two or three Days diſtance, *Exhibit.*

Turp. miner. gr. vii. or viii. in *Conſ. Roſ. rub.* and then purge again, as before, until the Malignity is ſubdued: But if there is only a ſimple Excoriation, *Unguent. Tutiæ*, or *Cerat. ex Lap. Calaminar.* will ſometimes heal it.

Q. *How is a Bubo to be managed?*

A. If there is only an Induration of the Glands, and the Infection recent, give mercurial Cathartick; but if it is large and painful, forbear purging, and haſten Suppuration, with *Empl. Diach. cum Gum.* or a Cataplaſm *ex Rad. Lilior. alb. Altheæ, Allii, Bryon. Fim. Columbi, Pic. pinguid*, &c. And when Matter fluctuates, open it by Cauſtick, ſeparate the Eſchar, and apply Digeſtives, and then purge with Mercurials; and if it yet proves vexatious, give a Doſe or two of *Turb. miner.* at due Intervals; and if ſtill it will not yield, do not triſle, but proceed to Salivation.

Q. *How is a* Hernia Humoralis, *or hard Venereal Tumor of the Scrotum to be cured?*

A. Having prepared a fitting Bag-Truſs, to ſupport its weight, and big enough alſo to contain a Cataplaſm, make one *ex Farin. Fabar. Flor. Sambuc. Chamæmel. Meliloti*, in *Aq. Font.* or *Oxymel. ſimpl.* to which add *Unguent. Sambuc.* Avoid all reſtringent Applications, and purge with *Pil. ex Duobus* and *Calomel.* But if notwithſtanding it increaſeth, and threatens an Abſceſs, have recourſe to a few Doſes of *Turbith*, at fit diſtances, to make Revulſion, and then purge as before; and if any hardneſs remain afterwards, apply *Empl. è Cicut. cum Ammoniaco, vel Diaſulphuris, de ranis cum Merc.* &c.

Q. *How is a Simple Gleet, with, or without, the foregoing Symptoms, to be carried off?*

A. Not always by the very ſame Method, but as Symptoms, Conſtitution, Seaſon, *&c.* indicate.

Q. *Does*

Q. *Does not ſtrong and frequent Purging often cure it, without any thing elſe?*

A. I believe never, without Balſamicks; and altho' different Habits and different Degrees of Infection, may require different Catharticks, yet thoſe of the violent ſort, if too long uſed, and in weak Conſtitutions, are often ſo far from curing, that they will cauſe a return of Symptoms (if before abated) and tear the Conſtitution to pieces; eſpecially, where there is a bilious Blood, and where *Colocynth*, and *Scamony*, have been the Purges.

Q. *How then muſt I proceed?*

A. In hot, dry, bilious, hectical Habits, cooling gentle Catharticks, ſuch as *Elect. Lenitiv. Crem. Tart. pulv. Rhabarb. Jalapii*, &c. and Decoctions *ex Fol. Senæ, Tamarind. Sal. Tart.* &c. are beſt: but in cold flegmatick Habits that common Purge, of *Pil. ex Duobus* with *Calomel*, is as good as any; notwithſtanding the great Pretences ſome make to *Noſtrums*, in curing this Diſeaſe: and all ſuch Pretences are no better than *Quackery*, and hardly any regular Surgeon attempts it now-a-days, but vary their Medicines according to Circumſtances.

Q. *However, for the ſake of young beginners, I pray you to give ſome* Formulæ?

A. To ſatisfy ſuch, I will; and firſt, for

A PILL.

℞ *Pulv. Aloes, Jalapii, ana* ʒij. *Diagrid. Colocynth. Crem. Tart. ana* ʒſs. *Tart. Vitriolat. gr.* xii. *Merc. dulcis* ʒiſs. *cum Syr. è Spin. Cerv. & Balſ. Capivi, q. ſ. fiat maſſa, Doſ.* ʒſs.

An ELECTUARY.

℞ *Elect. Lenitiv.* ʒiij. *Balſ. Capivi,* ʒſs. *Calomel. Diagrid. Reſin. Jalapii, ana* ʒij. *Crem. Tart.*

Salis Prunel. Milleped. præp. Antimon. Diaphoret. ana ʒſs. *Syr. Altheæ, q. ſ. ut fiat Elect. Doſ. quant. Jugland. omni mane.*

Another.

℞ *Elect. Lenitiv. & Conſ. Lujulæ, ana* ʒiſs. *Pulv. Rhabarb.* ʒij. *Salis Prunel.* ʒiij. *Calomel.* ʒiſs. *Pulv. Agaric. Ant. Diaphoret. ana* ʒij. *Reſin. Jalapii* ʒj. *Balſ. Capivi, q. ſ. ut fiat. Elect. Doſ. quant. N. M. omni mane & nocte.*

Q. *Are not Injections ſometimes uſed, with Succeſs?*

A. Yes, to abate the Pain and Heat, in the *Urethra*, and to heal Excoriations there: they are generally made *ex Aq. Plantag. Troch. alb. Rhaſ.* and (when Ulcers are in the *Urethra)* ſometimes we add *Mel. Roſar. Mel. Ægyptiac.* or a few Grains of *Sacc. Saturni*, well mixed and uſed warm, always injecting it after making water.

Q. *Is not a yellow Gleet, commonly accounted ill?*

A. Generally it is; yet ſometimes in an ill Habit, or bilious State, it may not.

Q. *When the Malignity is carried off, and the Symptoms abated, how ſhall I finiſh the Cure?*

A. Not with Reſtringents; but when the Gleet is but little, white, tenacious, *&c.* mix *Conſ. Lujulæ, vel Cynosbat. & Balſ. Capivi, ana* ʒj. *Pulv. Rhabarb.* ʒij. *Pulv. Jalap.* ʒj. *& capiat quant. N. M. mane & hora Somni.* This, and a regular *Regimen*, commonly concludes the Cure. But ſometimes I alſo give the *Potio Alba Batean.* ſometimes made with *Tereb. Ven.* and ſometimes with *Balſ. Capivi.* But during the whole Cure, the Patient muſt abſtain from all ſtrong Liquors, and from all ſalt, ſour, and ſpicy Food, and from Venery.

Q. *But ſuppoſe, that with all the Care and Caution that can be uſed, Symptoms do not abate; or if abated, they return, what muſt be done?*

A. Give

A. Give an Emetick, *ex Turb. miner. gr.* vii or viii. and repeat it, at two or three Days diſtance, for two or three Doſes, and then purge; and ſo do *by turns*, until Symptoms go off.

Q. *I am told that ſome give* Tinct. Cantharidum?

A. It is too dangerous for young beginners to meddle with, and I adviſe you to let it alone.

Q. *Is there any thing that will prevent an Infection, if an infected Perſon is carnally converſed with?*

A. It is pity there ſhould be any ſuch thing, and I believe there is not; and if I knew ſuch a Secret, I would not diſcover it: the ſureſt way is to live honeſtly.

Q. *Is not the Venereal Diſeaſe, (either the firſt or ſecond Infection) to be cured without Mercury?*

A. I will not ſay, that the thing is *impoſſible*, but I ſhould be loth to put it to the venture; and if any are cured without it, it muſt be the firſt Stage, and that too of a mild Nature.

Q. *Sometimes the Mercury runs thro' the Patient downwards, can it profit him in ſuch a Caſe?*

A. Dr. *Quincy* ſays, that it may be ſo fixed by giving *Camphors* with it, that it ſhall have no ſenſible Operation at all, only act as an *Alterative*; which I have in ſome meaſure experienced to be Fact: and the reaſon why we commonly give *Calomel* over Night, and purge it off in the Morning, is not *only* to prevent its ſalivating, but, *alſo*, to fuſe the Blood, break its Globules, diſſolve the pocky Salts, open the obſtructed Tubes, and ſo to prepare Matters, to be carried off by Catharticks; without which, Catharticks ſeldom do much good. And let me adviſe you not to undertake to cure any ſuch Patient by the Lump; or, *no Cure no Money*: for theſe ſorts of Sinners are apt at all times (much more when ſo ſecured) to get *Clap upon Clap*, to whore on, and not own

it,

it; to the tiring out your Patience, as well as to your great Vexation, and fruitleſs Expence of Pocket, and too often of Reputation too.

Q. *Pray what are the* Diagnoſtick *Signs of a* Pox, *or ſecond Infection, as it is called?*

A. Seldom any Man has all of them, but every pocky Patient has ſome of them, *viz. Serpiginous Eruptions, Inguinal Tumors, and Abſceſſes, Ophthalmia's, Ozæna's, Ulcers of the Uvula and Tonſils, Nocturnal Pains on the Shoulders and Shins, Hemicrania's, Cephalæa's, Gummata, Tophs, Nodes, Exoſtoſes of the Bones, Scabs with cruſty tawny Tops, eſpecially on the Head, and Forehead*; and the back part of the Fauces are ulcerated, *cum multis aliis.*

Q. *What are the* Prognoſtick *Signs?*

A. If the Infection is recent, if the Patient is not Scorbutick, Rheumatick, Arthritick, Cacochymick, or has not got Pox upon Pox, but is of a ſound Habit, and will be govern'd and ſubmit to Rules, we may hope for Succeſs: but if the venereal Taint has an uncommon Virulency, is of an old Date, or that the Patient is a *Veterane* in Iniquity, has been accuſtomed to Mercury, is of an ill Habit, will whore on, live irregularly, and neglect Rules, be ſparing of your Promiſes, and not fond of meddling withhim at all.

Q. *Do you think it impoſſible to raiſe a Salivation without Mercury?*

A. It is more than probable, that it is *impoſſible*; but ſuppoſing it was *poſſible*, yet unleſs ſuch a Medicine, as would as copiouſly raiſe a Salivation as Mercury, was as peculiarly adapted to encounter the venereal *Virus*, as that is, the glandular Secretion would ſignify little.

Q. *Why are drying Dyet-Drinks made of the Woods given?*

A. After

A. After Salivation, they give a ſort of *Elaſticity* to the Blood, dry up Superfluities, warm, open obſtructed Veſſels, and reſtore the Tone of the over-relaxed Fibres, *&c.*

Q. *Which of the Woods are moſt in uſe?*

A. The moſt in uſe, are *Guaiacum, Sarſaparilla, Saſſafras, China, Lign. Juniperi, Buxi, Ebon. Abietis, Santal. omn.* with *Rad. Bardan. Petaſit. Fol. Perſicar. Saponar.* &c.

Q. *Which is accounted the beſt way to raiſe a Salivation?*

A. If the Diſeaſe is not too deeply radicated, the beſt way (becauſe the ſafeſt) is to raiſe it by *Calomel*, otherwiſe the way by Unction is more eligible.

Q. *Some uſe Arcan. Corallin. Merc. Vitæ, green, red, and yellow Precipitate, Panacea Mercur.* &c. *your Opinion of them?*

A. Let it be a ſtanding Rule with you, ever to prefer the ſafeſt Medicines and Methods, and not to try Experiments to the hazard of your Patient, in hopes to find a ſhorter cut to the Cure.

Q. *Suppoſe I was to raiſe a Salivation by Calomel, how ought I to proceed?*

A. In every Method, take time, do it leiſurely and by ſmall Doſes, rather than large, leſt you raiſe a Devil that you cannot conjure down again; therefore (if by *Calomel*) give *gr.* xv. or xvi. in a Morning, and as much at Night, in *Conſ. Roſ. Rub. vel Diaſcord.* every Day; and in three or four Days, you will *commonly* ſee the Signs of a coming Salivation, *viz.* the inſides of the Cheeks tumified, the *Fauces* inflamed, the Tongue white and foul, the Gums ſwelled, the Breath ſtinking; the Patient is at times ſick at Stomach, and ejects a thin Phlegm, which (if moderate) is a good Sign; but if violent and continual, is bad, *&c.* When the inſide of the Mouth is whealed, you may certainly,

tainly infer, that Ulcers are at hand: and now you may desist a Day or more, to wait the Progress of the Salivation; which if it rises kindly, *desist*; if not, give another Dose or two of the *Calomel*, and if need be, increase it.

Q. *Suppose that in several Days taking the Calomel, the Spitting does not come on kindly, nor other Symptoms appear, what must be done?*

A. In some Constitutions, with these small Doses, the case will sometimes so happen; in that case, after the Patient has taken two or 3iij. of the *Calomel*, (if you find he has Strength to bear it) exhibit *gr.* vii. of *Turpeth. Mineral*, drinking warm Poslet-Drink, or Gruel, between the Reachings, but not too much, lest it turn downwards; and if one such Dose will not do, give another at due distance, until you gain your Point.

Q. *But does it not sometimes happen, that contrary to all Expectation and Endeavours, the Salivation will not come on? What must be done in that case?*

A. In some Constitutions there is such a Disagreement between the Particles of the Mercury, and the *Lympha*, (whether from its Tenacity, or some defect in the Salival Glands) it does sometimes happen as you object. In that case, do not hazard your Patient's Welfare, but forbear giving any more Mercury, and purge off what is already given, and have recourse to your Dyet-Drinks, alterative Electuaries, or Pills *ex Ceruss. Antimonii, Gum. Guaiaci*, &c. sometimes sweating with *Antimon. Diaphoret. Bez. Min. Cinnab. Antimon.* &c. drinking warm Draughts of Dyet-Drink in Bed: Thus by contemperating the contaminated Juices, perspiring the noxious Particles, and drying up the superfluous Serum; the Cure, (altho' longer) may often be effected without Spitting.

Q. *If*

Q. *If the Salivation comes on kindly, how long is it to be continu'd?*

A. If it be moderate, it is beſt to ſuffer it to work itſelf off: which ſometimes it will do in one and twenty Days, ſometimes in thirty, from its firſt beginning.

A. How much is called a ſufficient Quantity, to ſpit in four and twenty Hours?

A. That is ever to be regulated by Age, Strength, and Degree of Infection, *viz.* a Pint and half, a Quart or three Pints, to four Pints, and ſometimes more; but if it continues too long, purge it off, leſt the Patient ſinks under it.

Q. *How does the Mercury operate, to cauſe a Salivation?*

A. By fuſing the Blood, thinning its tenacious Particles, opening the obſtructed Tubes, and diſſolving the Venereal Salts, and ſo fitting them for diſcharge by the Salival Glands, and afterwards by Cathartick.

Q. *How muſt the Body be prepared for a Salivation?*

A. If the Patient be of a ſanguine Habit, take away a little Blood, let him ſubmit to ſome Abſtinence, and purge gently once or twice, to prevent a Diarrhœa and Inflammation of the Parts; and in lean, thin Habits they may firſt bathe in warm Water; and the latter end of the Spring, or beginning of Autumn, are the moſt proper Seaſons for it.

Q. *How ought a Salivation by* Unction *to be raiſed?*

A. It is ever good to be on the ſafe ſide, and not to raiſe it too haſtily: My Method is, to mix ℥j. of the Mercury with ℥iij. of the *Axungia* (after being well killed, as it is called, with *Tereb. Ven.*) and rub in an eighth part Night and Morning; and

and either let the Patient do it himſelf, or cover your own Hands with a Bladder and do it for him before a Fire, he being ſecured from the cold with a Blanket; rubbing it in from his Ankles up his Legs, all along to the upper part of his Thighs, which cover with Yarn Stockings, and Flannel Trouzers, and rub in the remainder of the ſaid eighth part (each time) on his Arms, and about his Elbows.

Q. *I am informed, that ſome Surgeons uſe* ℥vj. *of the Mercury to* ℔j. *or* ℥xx. *of the* Axungia, *and rub in* ℥j. *or* ℥ij. *twice a Day.*

A. If you err, let it be on the right ſide; but if your Unguent is ſo ſtrong of the Mercury, and that you anoint twice a day, if after four times anointing, the Patient's Mouth begins to ulcerate, *deſiſt* a Day or more; as you muſt alſo, if bloody Stools, or Gripes come on: but if nothing of theſe appear, *proceed* another Day or two, and then intermit a Day, and ſo go on with Caution, until the Spitting comes on, *and then forbear.* But if after rubbing in ℥iſs. or ℥ij. of the Mercury, the Salivation does not riſe, give a Doſe of ſeven Grains of *Turbith*; but if a due Quantity of the Mercury has been firſt rubbed in, wait a Day or two: when after ſuch waiting, it will ſometimes come on *unexpectedly*, without taking any thing; and it is better to be too ſlow, than too raſh or haſty, eſpecially in ſalivating by Unction: and if there are *Tophs* or *Nodes*, be ſure to rub the Mercury well in there.

Q. *How is the Patient to be managed, during his Salivation?*

A. Beſure always to encourage him to go on chearfully, give him ſometimes a little red Wine mull'd with a third of Water: let his Dyet be Panada, Mace-Ale, Water-Gruel, ſmall Chicken-

Broth, Milk-Pottage, ſmall Sack-Whey, Poſſet-Drink, and ſometimes ſmall Beer with a Toaſt: but if Gripes or Looſeneſs attend, let his Drink be only the *Decoctum Album*, made *ex C. C. C.* &c.

Q. *How is he to be cloathed, or ſecured from cold, in the Salivation?*

A. He ſhould have woollen Stockings, Flannel Trouzers, Shirt, Cap, and Muffler; which ſhould be changed for others, when you want to purge off the *Ptyaliſm.*

Q. *With what is that moſt proper to be done?*

A. Practitioners differ in this Point; but as good as any are the *Infuſ. Senæ, cum Syr. è Spin. Cerv. Manna, Syr. Roſ. ſolutiv.* &c.

Q. *How is the Patient at ſuch time to be dieted?*

A. You may permit him to eat moderately of Chicken, Veal, Rabbit, or Mutton well roaſted, without Sauce, or Gravy.

Q. *Muſt not the Patient then be ſweated?*

A. Yes, either in Bed, with *Ther. Ven.* ℥j. *Cinnabar. Antimon.* ℈j. *Bez. Miner. gr.* x. drinking after it a Draught of warm Dyet-Drink; or elſe (ſitting on a Stool naked, encompaſſed with a Folding-Cradle, covered with a Blanket, and only his Head out, and that well covered) with *Spir. Vini rect.* burning on each ſide of him; doing ſo every Day for an Hour or two, if Strength will permit, giving him in warm Napkins to rub himſelf with during his ſweating, and mull'd Wine to ſupport his Spirits: and do thus for three Weeks or more, putting him every time (after it) into Bed, between Blankets, to ſweat there alſo.

Q. *To what end or purpoſe will you do this?*

A. That the remaining morbifick Seroſities may be dried up before the Blood is filled with new,

new, nutritious Juices; therefore during this Courſe, it will be proper to keep to a ſpare Dyet; and for Supper, particularly, to eat only a Biſket, and a few Raiſins of the Sun, or ſuch like.

Q. *Suppoſe that in the time of his Salivation, a* Diarrhœa, *Dyſentery, or cruel Gripings attend?*

A. Every two or three Hours give a few Spoonfuls of ſome refreſhing Cordial, made of *Aq. Cinam. fort. & tenuis, Aq. Mirab. Menthæ comp. Syr. Cydonior. Diacod.* &c. firſt giving a Morſel of an Electuary, made of *Conſ. Roſ. rub. Diaſcord. Pulv. Coral. rub. Ter. Japon.* &c. made up with *Syr. è Mecon.* and let his Drink be the *Decoct. Alb.* and exhibit Gliſters of the ſame, *ad* ℔ſs. *cum Elect. Diaſcord. Ther. Ven. Vin. Canar. Vitel. Ovi, &c.* according to your Diſcretion; and give ſome of his Cordial after every Stool, and at proper Intervals, a Draught of mull'd Wine; to which ſometimes add a few Drops of *Laud. Liquid. Cydoniat.* but be as ſparing of that as you can, becauſe it checks the glandular Secretion.

Q. *What is the Conſequence of a* Diarrhœa, *in this Caſe?*

A. The Humours thereby are carried downwards, and the ſalivating hindered.

Q. *Suppoſe Sickneſs and Vomiting attend?*

A. If it be but gentle, let the Patient drink plentifully of Chicken-Broth, or Poſſet-Drink, and give now and then mull'd Wine, in which is boiled *Fol. Menthæ, Cort. Lymon. Caryoph. contuſ.* &c. But if the Vomiting and Pains are violent, attended with Fainting, cold Sweats, *&c.* the danger is great. Now if he is coſtive, give a Gliſter *cum Sacc. rub. Ol. Olivar. Sal. Gem.* &c. and give good Cordials, and Sack mull'd with Spices, and eſpecially when his Gliſter comes away; alſo wring

wring Flannel Cloths out of red Wine, boil'd with Aromaticks, and apply'd warm, *Scorbiculo Cordis*, and then anoint with *Ol. N. M. per Expreſſ. cum Ol. Abſinthii*, and renew the Flannels as they dry; but theſe Accidents are generally owing to the too haſty raiſing the Salivation, by giving too large Doſes of the Mercury; therefore be careful to guard againſt ſuch Practice.

Q. *What muſt be done to help their ſore Chaps?*

A. Let him often hold in his Mouth, warm *Aq. Hordei*, Milk, or Chicken-Broth; but uſe no Aſtringent, or digeſtive Gargariſms.

Q. *Why ſo?*

A. Becauſe the one dries the Ulcer too much, and ſo ſtops the Spitting; and the other brings off the Sloughs, and heals the Ulcers too ſoon. But if the *Acrid Salts* have eaten deep into the Parts, and ſo endanger loſs of Subſtance or a foul Bone, then promote the Digeſtion of the Ulcers, and deſtroy the rotten Fleſh.

Do the firſt with *Decoct. Hordei, cum Fol. Plantag. Equiſeti*, &c. *cum pauculo Tinct. Myrrhæ, & Mel Roſar.* and do the ſecond, by touching the Parts often with an armed Probe, with this, *viz. Mel Roſar.* ℥j. *Spir. Vitr. gutt.* xx. Ms. or with *Mel Roſar. Tinct. Myrrhæ, & Mel. Ægyptiac.* and keep the Jaws aſunder, by Rolls of ſoft Rags put between the backward Teeth, or elſe ſometimes you will meet with great Vexation, to keep open the Jaws.

Q. *Suppoſe the Patient is over-coſtive?*

A. This ſeldom occurs, ſo as to hinder the Progreſs of the Salivation; but when it does, exhibit a Gliſter, *ex Lacte, & Sacc. Rub. & Ol. Olivar.* and allow him greater Quantities of diluting Liquors.

Q. *Suppoſe a Teneſmus?*

A. Inject a Gliſter *ex Decoct. Alb. & Elect. Fracaſtor. & Ther. Ven. ana* ℥iij. *Vitel. Ovi*, N° 1. *Vin. Canar.* ℥iij. and repeat it as Occaſion requires.

Q. *What is the Conſequence of a too haſty riſing, or a too long Continuance of a Salivation?*

A. By the firſt, the Patient may be ſuffocated; and by the laſt, render'd conſumptive.

Q. *How muſt I prevent Suffocation?*

A. By *Derivation* and *Revulſion:* give ſharp Gliſters with *Hiera Picra, Sal. Gem. Colocynth.* &c. and give ſome Cathartick, if the Patient can ſwallow: alſo cup, and ſcarrify on the Shoulders, and bliſter behind the Neck, behind the Ears, and down each ſide the Neck; and ſyringe the Throat with the *Decoct. pro Syr. Altheæ, cum Syr. è quinque Radic. vel Limon.* or the *Decoct. Pect.* acidulated with *Spir. Sulph.* And if his Lungs are ſtuff'd, add to the *Decoct. Pect. Oxymel. Scillit.* in due Proportions, at proper Intervals.

Q. *How muſt a Conſumption be prevented, when threatned by too long ſpitting?*

A. By gentle *Cathartick*s, and *Diureticks*, with *Sal. Tart.* and to reſtrain any farther Colliquation, give *Flor. Sulphuris ad* ℥ſs. *vel* ℈ij. or *Lac Sulphuris*, to ℈j. in ſome proper Conſerve, two or three times a Day, and Morning and Evening ſome reſtringent Electuary, or a ſmall *Aq. Calcis*, and change his Sheets and Flannels, for others well dried. And if the Salivation is over, and the Patient hectical, put him into a Courſe of Aſſes Milk, and the *Teſtacea.*

Q. *Suppoſe there is an Ozæna, or Ulcer in the Noſtrils?*

A. That

A. That Ulcer, and thoſe of the Mouth, *Tonſils*, *Uvula*, (and Shankers on the Penis too) are beſt check'd by a Fumigation after this Manner, *viz.* gather the top of a Blanket all together, and tye it with a String, the other end of which String faſten to the Cieling; (if for an Ozæna, Ulcers in the Mouth, *&c.*) then place the Patient upon a Chair, under the Blanket, ſo as it may incloſe him; then ſet an earthen Diſh or Pan on his Knees, in which put a Brick, and upon that an Iron Heater, made near red-hot, on which put *Cinnabar. factit.* ʒſs. ∋ij. or ʒj. in fine Powder; then bring the Blanket cloſe round the Patient, and hold his Noſe (or Mouth open) over the Fume, now and then giving him Air, and ſtirring the *Cinnabar*, with the end of a Tobacco Pipe, to make it ſmoke afreſh; and after ſix or eight Minutes releaſe him: and do thus once a Day at leaſt (if not twice) for a Week or ten Days.

Q. *But ſuppoſe that the Ulcers are very foul, or that the Parts are in danger of being loſt?*

A. Then at convenient diſtances of time, dip an armed Probe *in*, and *touch them*, with this, *viz.* ℞ *Mel. Roſar.* ʒj. *Tinct. Myrrh. Mel. Ægyptiac. ana* ʒj. Ms. or carefully touch the Parts with *Lac. Sublimat.* and proceed to Salivation by Unction, if the caſe requires it.

Q. *But will not Fumigation ſometimes ſalivate?*

A. In ſome Conſtitutions it will; but you may carry it off by purging, and forbearing to fumigate.

Q. *Suppoſe there are* Serpiginous, *or other cutaneous Eruptions?*

A. Touch them carefully with *Lac Sublimat.* or *Præcip. Alb.* mixt with *Unguent. Alb.*

Q. *Suppoſe* Gummata, *Tophs, or Nodes?*

A. Apply ſuch a Plaiſter as this, *viz.* ℞ *Cinnab. Fact.* ℥ſs. *ad* ℥j. *Ceræ flav.* ℥iiij. *Ol. Roſar.* ℥j. *Colliq. ut bene miſceantur, & fiat Empl.* and proceed to Salivation, without attempting to open the *Toph* or Induration; which (if the Bone is not foul) will in the Courſe of the Salivation diſappear. However, ſome great Surgeons may practiſe the contrary; but for what Ends, is but too evident.

And laſtly, take care in the courſe of Salivating, that your Patient does not ſwallow the Saliva, or Lympha, thereby ſwallowing his own Poiſon; therefore, before he eats or drinks (during his Salivation) every time let him waſh, or gargle his Mouth well.

Q. *I had forgot one Caſe, that may happen, and ſhould have been named before,* viz. *ſuppoſe a Patient has a* Phimoſis *and many Shankers, or large Warts ſprouting out of the Glans and its Neck, which can no way be come at, by reaſon of the cloſe Conſtriction of the* Præpuce, *over the Ends of the* Glans?

A. That is really an ugly caſe; and I know that Surgeons generally divide the Prepuce with their Probe-Sciſſars, to come at theſe *Warts, Shankers,* &c. But I do not like that Method; for they often adhere both to the *Prepuce* and *Glans,* and then ſuch Diviſion is fruitleſs: and before you can deſtroy theſe Appearances, the Wound in the Prepuce will heal, and that part be exceedingly deformed, and toubleſome ever after.

Q. *What other Method can be taken?*

A. The way I take, (tho' I have no Precedent for it) and which I am ſure, by happy Experience, is the beſt, is this: Put up with the end of your Probe, Lint all round, between the *Prepuce* and *Glans,*

Glans, (to prevent the *Glans* being hurt by the Cauſtick) then apply a mild Cauſtick, made of *Calc. Viv. & Lixiv. Capital.* (as is directed in this Book) all round the Prepuce, ſecured handſomely on, which in an Hour or little more will make its way thro' the *Prepuce*, which you may then divide, without any Pain, and it will drop off from the Glans, and leave it quite bare; ſo that you may ſee what you do, in extirpating thoſe *Verrucæ*, by Inſtrument, or *Lunar Cauſtick*, as you ſee moſt proper: *Circumciſion* being more deſirable, than a deformed and troubleſome *Prepuce*, and ten times more convenient for the Cure of your Patient.

Q. *I forgot, until now, to name it, (but it is a neceſſary Enquiry;) ſometimes during a Salivation, a Hemorrhage of the Mouth happens; pray how muſt it be reſtrained?*

A. If it be from a Tooth lately drawn, a ſmall actual Cautery apply'd, is the moſt ſecure way: If it proceeds from the Separation of the Sloughs, (and not too violent) Oxycrate held in the Mouth may be ſufficient; or if not, a thick Dorſel, or ſmall Button of Lint apply'd, being firſt covered with powder'd Vitriol, or (ſometimes) Allom, to the bleeding part, and held firmly on; and ſometimes a reſtringent Gargariſm, acidulated with *Spir. Vitr.* &c. may be ſufficient.

Q. *Suppoſe Infants, or Women with Child infected? How muſt we proceed with them?*

A. Theſe require great Care and Caution; and altho' pregnant Women have undergone a Salivation, without any harm, and Authors tell us of Infants ſafely ſalivated; yet I think (until the Woman is deliver'd) a palliative Cure is ſafeſt. And as to Infants, Salivation is a dangerous Experiment; but rather, let all their Food and Drink

be medicated with *Sarſa* and *China*, and (according to age) give them Calomel over Night, and purge it off in the Morning with *Syr. Rhabarb. vel Roſar. Sol.* every three or four Days, and ſometimes *Æthiops Min.* given Night and Morning. And theſe Hints to a Mind and Underſtanding not ſtupid, but capable of Improvement, are ſufficient; and to thoſe that are not, as much more Inſtruction would ſignify little.

Q. *You mention very often the uſe of* Lac Sublimati, *I deſire to know its Preparation.*

A. It is eaſily made: Take only *Merc. Sublimat.* ℥iij. in Powder, put it into a Pewter Baſon, and put to it *Aq. Font.* ℥vj. and ſtir it about until it becomes white, then put it into a Phial for uſe.

Q. *I have been aſſured, that ſome have been cured of a ſimple Clap, by only taking a few Drops of a certain Liquor, daily for a Week or ten Days: Is ſuch a thing poſſible? or if it is, pray what is the Secret?*

A. I believe it has by chance been done, in ſome ſtrong Conſtitutions; but it is a dangerous Experiment, being apt to cauſe great Sickneſs at Stomach; ſometimes it vomits violently, ſometimes it works the other way, and ſometimes both ways, and often ſalivates, if not timely purged off; the Preparation is this:

℞ *Merc. Sublimat.* ℥j. S. V. *rect.* ℥j. *fiat Solutio, Doſ. gutt.* x. xij. *vel.* xv. in Poſſet-Drink, or Water-Gruel, every Morning, increaſing the Doſe in ſtrong Bodies *ad gutt.* xx. and ſome give it twice a Day; but I adviſe you not to meddle with it at any rate. But you will hardly fail of a Cure in any Caſe, if you follow the ſafe Directions I have before laid down; without trying *dangerous Experiments*, to make *ſhort Cures*, eſpecially where the Patient has the Phial to take the Drops himſelf; who being in haſte to be well, and

not

not knowing the danger of an *Over-Doſe*, may take ſo many Drops as may ruin him; and you may depend upon't, that he will not own it, but it is *you* that muſt bear all the *Blame*, and *Shame* too, if he miſcarries. Therefore do not meddle with it, but be always careful to do that, which is both ſafe and honourable.

F I N I S.

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